

**The**

# CONSTRUCTOR

OFFICIAL PUBLICATION OF THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA



Volume XXXIII

**FEBRUARY 1951**

Number 2

● BUILDINGS

● HIGHWAYS

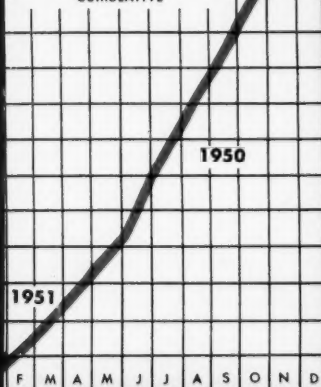
● AIRPORTS

● RAILROADS

**PUBLIC WORKS**



**NEW CONSTRUCTION**  
(Billions of Dollars)  
CUMULATIVE



**National**

**Budget**

**Analysis—Page 33**

# Drivers Prefer Trucks with

# EATON

## *2-Speed Truck*

# AXLES

Drivers report they are less fatigued after long trips on trucks with Eaton 2-Speed Axles. Eaton equipped trucks are easier to maneuver; quicker on the get-away in traffic; climb hills more smoothly; highball on the open road yet have plenty of power to pull out of tough spots.

These advantages are possible because Eaton 2-Speed Axles give drivers twice

the conventional number of gear ratios from which to choose the one best suited for road and load conditions.

Truck owners also are pleased with Eaton 2-Speeds by the saving in maintenance costs, faster schedules, lower cost per mile. Your dealer will be glad to explain how Eaton's planetary gearing, positive lubrication and other exclusive features make Eaton axles last longer.

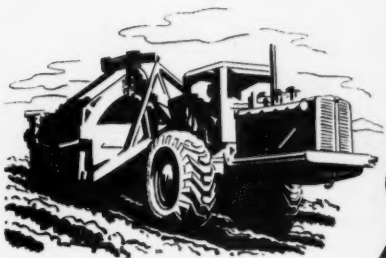


*Axle Division*  
**EATON MANUFACTURING COMPANY**  
CLEVELAND, OHIO



PRODUCTS: SODIUM COOLED, POPPET, AND FREE VALVES • TAPPETS • HYDRAULIC VALVE LIFTERS • VALVE SEAT INSERTS • JET ENGINE PARTS • ROTOR PUMPS • MOTOR TRUCK AXLES • PERMANENT MOLD GRAY IRON CASTINGS • HEATER-DEFROSTER UNITS • SNAP RINGS

SPRINGTITES • SPRING WASHERS • COLD DRAWN STEEL • STAMPINGS • LEAF AND COIL SPRINGS • DYNAMATIC DRIVES, BRAKES, DYNAMOMETERS



**It pays  
to compare**

**CPY\***

\* **Cost per yard**—so much lower when you use Goodyear's special-purpose, special-tread, job-specialist tires. Cost-conscious construction men have made them First Choice!

Compare *cost per yard* and you'll see why

**It pays to  
Buy and Specify  
Goodyear!**

We think you'll like  
"THE GREATEST STORY EVER TOLD"—  
Every Sunday - ABC Network



**SURE-GRIP**

Tops for drive-wheel traction on graders and pans

**HARD ROCK LUG**

Super-tough champ for all types of rock work

**ALL-WEATHER**

Finest for flotation, rolling big loads faster

All-Weather, Sure-Grip-T.M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

**GOOD YEAR**

**MORE TONS ARE HAULED ON GOODYEAR TIRES THAN ON ANY OTHER KIND**

**THE CONSTRUCTOR, FEBRUARY 1951**



## 'INCOR' 24-HOUR CEMENT SPEEDS GAY WHITE WAY PAVING, TIMES SQUARE TO COLUMBUS CIRCLE

● Latest Broadway hit is the well-groomed stretch of new Main Stem paving throughout the length of the Gay White Way, from Times Square to Columbus Circle. Taking a bow for stellar performance in this new version of "Street Scene" is 'INCOR' 24-HOUR CEMENT.

Car-track removal and repaving were completed in record time, amidst the bustle and confusion of this most heavily congested area.

On a block-to-block, half-width basis, the old pavement was torn out, utilities and subgrade readied, and 'Incor' concrete placed. Dependable 24-hour service strength made it possible to run trucks over newly-placed sections, speeding work all along the line. At intersections, 'Incor'\* concrete, service strong in a few hours, was ready to carry heaviest traffic.

No stranger to Gotham, America's FIRST high early strength Portland cement speeds traffic over many miles of New York City streets and bridges . . . time saved at the outset . . . maintenance dollars saved through the years.

\*Reg. U. S. Pat. Off.

Supervision of  
CITY OF NEW YORK—OFFICE OF PRESIDENT  
BOROUGH OF MANHATTAN

Contractors:  
FRANK MASCALI & SONS, INC., Flushing, L. I.  
TRIBORO ASPHALT CORPORATION, Flushing, L. I.

'Incor' Ready-Mix Concrete:  
COLONIAL SAND & STONE CO., INC., New York



Placing 'Incor' concrete at 43rd Street—in the clutches, 'Incor' was ready for traffic in a matter of hours.



Crosstown traffic moving over newly-placed 'Incor' concrete at 46th Street intersection.

## LONE STAR CEMENT CORPORATION

Offices: ALBANY • BETHLEHEM, PA. • BIRMINGHAM • BOSTON  
CHICAGO • DALLAS • HOUSTON • INDIANAPOLIS • JACKSON, MISS.  
KANSAS CITY, MO. • NEW ORLEANS • NEW YORK • NORFOLK  
RICHMOND • ROANOKE • ST. LOUIS • PHILADELPHIA • WASHINGTON, D. C.  
LONE STAR CEMENT, WITH ITS SUBSIDIARIES, IS ONE OF THE WORLD'S LARGEST  
CEMENT PRODUCERS: 17 MODERN MILLS, 125,000,000 SACKS ANNUAL CAPACITY



LONE STAR CEMENTS COVER THE ENTIRE CONSTRUCTION FIELD



# The CONSTRUCTOR

## CONTENTS

BUILDINGS • HIGHWAYS • AIRPORTS



RAILROADS • PUBLIC WORKS

### CONTROLS

Mobilization Moves Toward Fully-Controlled Economy	23
Controls Checklist	24
Nearly All Commercial Construction Curbed	24
Credit Controls on Apartment Building	25

### LABOR RELATIONS

Construction Wage Policy Being Studied	26
Wage Stabilization Regulation 1 Issued	26
Keenan Succeeds Rivers in AFL Post	27
Labor Cases Affecting Construction	27

### LEGISLATION

82nd Congress to Make Big Decisions	28
President Gets War Powers in Contracts	28
\$3 Billion Defense Housing Bill Considered	29
Stronger Renegotiation Bill Sought	29
Civil Defense Arm Has Broad Powers	30
The Excess Profits Tax Law	John C. Hayes 31

### NATIONAL BUDGET

Budget Has \$3.8 Billion for Civil Public Works	33
Building Construction Budget Itemized	34
Heavy-Railroad Construction Budget Itemized	37
Highway-Airport Construction Budget Itemized	38

### ECONOMICS

National Security Calls for \$140 Billion in Two Years	39
--	----

### NATIONAL DEFENSE

Civil Defense Report Submitted by AGC	42
AGC Sponsors Three Engineer Brigades	43
Chief of Engineers Praises AGC Activity	44

### RESEARCH • METHODS

Metal Exterior Walls Have Bright Future	46
---	----

### HEAVY • RAILROAD

Oakland Viaduct Required Ingenuity	54
St. Louis Bridge Caught by Workman's Camera	55

### HIGHWAYS • AIRPORTS

BPR Tells Road Builders to "Go Slow"	58
Snow Wins Race with Snowshed Builders	59

### BUILDING

New York Building Code Makes Strides	63
A.I.A.-A.G.C. Committee Holds Session	63
42 Billion Feet of Lumber Consumed in 1950	64

### NATIONAL ASSOCIATION

Leaders to Discuss Vital Problems at Convention	67
A.G.C. Announces Results of Elections	68

### CHAPTERS • BRANCHES

Chapters Elect Officers at Conventions	69
--	----

### ACCIDENT PREVENTION

Mutuals of Wausau Honor G. W. Maxon	74
311 Finish in A.G.C. 1950 Safety Contest	74

### INDUSTRY RELATIONS

Value of Standards Discussed at Conference	77
Prequalification Topic at Michigan Meeting	77

### ALSO IN THIS ISSUE

News of the Month	5
Constructographs	7, 9, 11, 15
Consumers' Price Index	17
Sidelights for Contractors	John C. Hayes 19
Editorials	21
New Equipment and Materials	79
Advertisers' Products	91
Index of Advertisers	95

#### EXECUTIVE DEPARTMENT

H. E. FOREMAN Editor	JOHN C. HAYES Legal Adviser	JOHN B. SWEM Assistant Treasurer
-------------------------	--------------------------------	-------------------------------------

#### BOARD OF DIRECTORS

GEORGE B. WALBRIDGE President	WILLIAM MUIRHEAD Secretary-Treasurer
H. E. FOREMAN Vice-President	G. W. MAXON Director
	B. L. KNOWLES Director

#### EDITORIAL DEPARTMENT

WILLIAM E. WOODRUFF Managing Editor	WILLIAM G. DOOLY, JR. News Editor
--	--------------------------------------

#### BUSINESS DEPARTMENT

M. S. BECK Business Manager	GENEVIEVE MORRIS Assistant
--------------------------------	-------------------------------

### COVER

Our cover shows wire being spun into massive suspension cables to support the \$40,000,000 Delaware Memorial bridge by U. S. Steel's American Bridge Company. This modern "crossing the Delaware" commemorates General George Washington's feat by rowboat 174 years ago. The bridge will be completed in 1951 and will carry 4,000,000 motor vehicles annually. The structure will supplant the ferry service now operated between Pennsville, New Jersey and New Castle, Delaware.

#### Editorial and Advertising Offices

Munsey Building, Washington 4, D. C. (District 1306)

#### Eastern Advertising Office

Empire State Building, New York City 1, S. L. Feiss, Eastern Manager (LOngacre 4-6634)

#### Western Advertising Office

30 North La Salle Street, Chicago 2, L. B. Hammond, Western Manager (RAndolph 6-1843)

#### West Coast Advertising Office

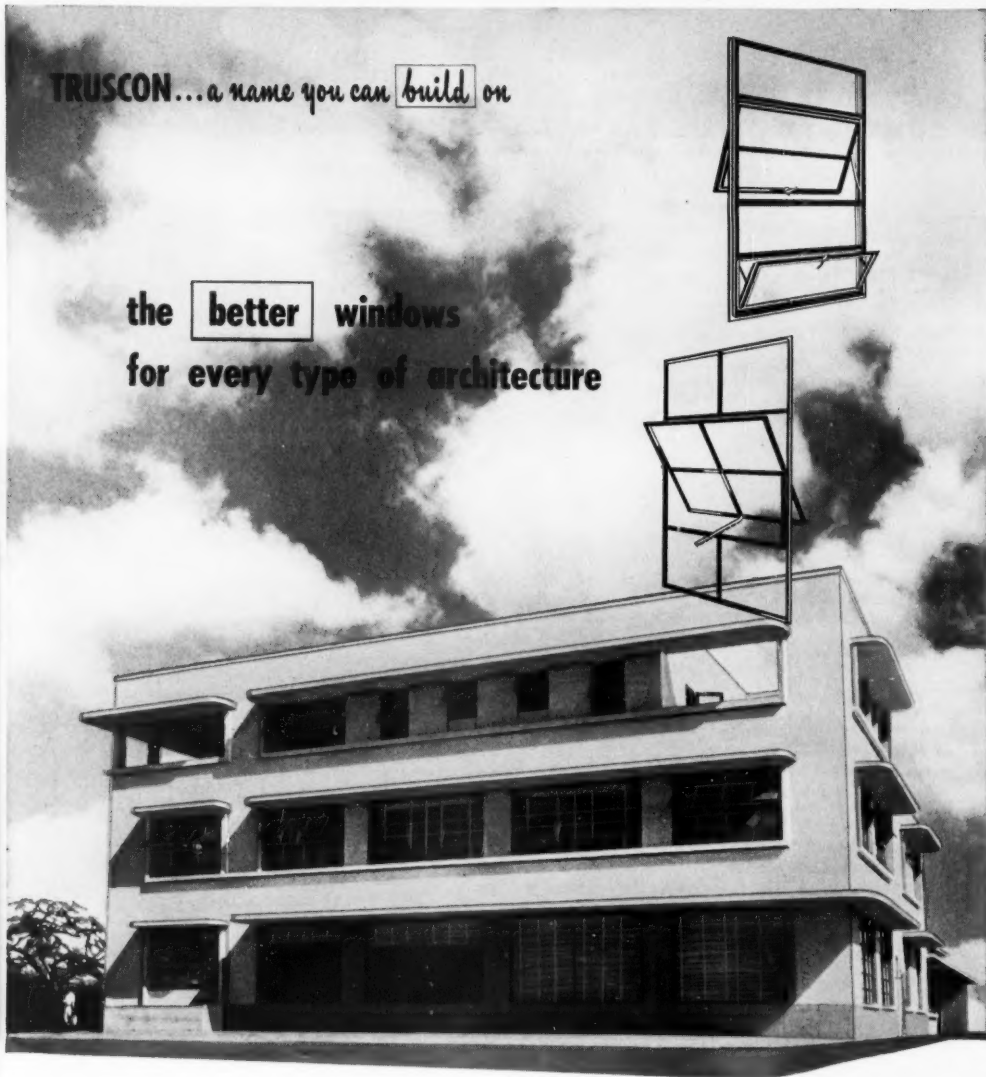
M. D. Pugh, 2721 N. Marengo, Altadena, Calif. (SYcamore 7-2894)

The Official Publication of The Associated General Contractors of America, Inc.

Published monthly. Editorial and Executive Office, Munsey Building, Washington 4, D. C. Subscription price \$5.00 per year, 40¢ per copy (July \$2.00). Re-entered as second class matter June 16, 1949, at the Postoffice at Washington, D. C., under the Act of March 4, 1879. Copyright 1951 by The Constructor, Inc.

TRUSCON...a name you can **build** on

the **better** windows  
for every type of architecture



Strikingly modern effects, such as those shown in the Coca-Cola Bottling Plant, Maracaibo, Venezuela, can be achieved with the versatility of Truscon Pivoted and Architectural Projected Steel Windows. The development of structural strength, with the attainment of required lighting and ventilation factors, are additional architectural advantages secured with Truscon Steel Windows in this new South American building.

*Credit: Richard Brunel, Caracas, Venezuela, Architect;  
Hegeman-Harris Co., New York, Contractor*

See SWEET'S for complete details on the entire line of Truscon Steel Windows for every purpose; and write for detailed literature on all other Truscon Steel Building Products.

**TRUSCON® STEEL COMPANY** YOUNGSTOWN 1, OHIO  
*Subsidiary of Republic Steel Corporation*

**After issuing** stopgap orders freezing prices and wages effective January 25, the government immediately began work on regulations pertaining to specific industries. The price-wage orders, issued simultaneously January 26, only a few days after Eric Johnston supplanted Alan Valentine as Economic Stabilization Administrator, froze prices at a point not higher than the peak between December 19 and January 25, and wages at levels not exceeding those in effect on January 25.

**Within a week**, the "unfreezing" procedure began, with the wage order relaxed to permit pay increases negotiated prior to midnight of January 25. This particularly highlighted wage increases negotiated by John L. Lewis' coal miners, and on February 1 price increases were authorized on coal, on which the wage increases originally were hinged. At the same time, price ceilings were removed from strictly military purchasing by defense agencies.

**Some dissension** still existed in the government's controls structure, despite the virtual forcing out of Mr. Valentine. The wage order was issued by Mr. Johnston without Wage Stabilization Board Chairman Cyrus Ching's signature, who, with other board members, were working on their draft of the wage stabilization policies to be recommended. (See Page 26.) Also, the wage increase for the coal industry was voted with industry members of the board dissenting. Friction was reported by the press in the selection of a manpower coordinator under Defense Mobilization Director Wilson, with Secretary of Labor Tobin carrying his fight for the job directly to the President.

**Effect on construction** of the stopgap wage-price controls, until superseded, requires interpretation based on experience with similar controls during World War II. Application of price controls on the industry is considered difficult, if not impossible. Detailed regulations affecting various industries were expected in the near future.

**A tentative plan** for stabilization of wages and working conditions in the construction industry is under study after a meeting in Miami where proposals of the A.F. of L.'s Building and Construction Trades Department

were discussed with representatives of the A.G.C. and national associations of specialty contractors. A board similar to the Wage Adjustment Board of World War II would be created, and the plan would apply to both defense and civilian construction operations. (Page 26)

**Virtually all** new private commercial construction was made subject to National Production Authority authorization by an amendment of NPA Order M-4, formerly confined to amusement, recreational and entertainment construction. In general, NPA's policy was to issue no authorizations to begin construction prior to February 15, except in emergency situations and cases involving hardship and national defense. Application forms available at Commerce Department district and regional offices, to be filed with the latter. (Page 24)

**Exempt from** the order were wholesale food establishments; wholesale supply facilities for fuel oil, gasoline or coal; gas distribution systems; pipe lines; maintenance and repairs; certain small jobs not costing more than \$5,000; reconstruction of buildings or structures that are destroyed; and construction for the Department of Defense or Atomic Energy Commission.

**Imposition of credit** controls on commercial construction was under discussion early this month by the Federal Reserve Board. Such action would place many types under double control—both by NPA and credit-wise. On January 12, FRB revised Regulation X, the real estate credit control regulation, to bring under it three- and four-family and multi-unit residences. Companion schedules were released on government-aided loans by the Housing and Home Finance Agency and Veterans Administration. (Page 25)

**President's \$71.6 billion** budget for fiscal year 1952 recommends \$3.8 billion expenditures for civil public works. No estimate given of military construction, but armed services have launched a billion-dollar base construction program. Complete analysis of construction part of the budget, with tables, begins on Page 33.

**Another emergency tax** request for around \$10 billion sent by President to Congress February 2. Calling for increases in income, corporation, and

excise levies, the request may be followed by another to take care of an estimated \$16.5 billion deficit for next fiscal year. A dispute reported by the press to have begun at White House conference on government spending was expected to blossom into a lively fight in Congress to pare the budget and hold down taxes.

**Bureau of Public Roads** warned highway departments to "go slow" on projects other than access roads that involve critical materials, pending clarification and determination of controlled materials plan by NPA. (Page 58)

**Termination clauses** in highway construction contracts are being used by California, Indiana, Kansas, Missouri, Ohio and Oklahoma, and others are conferring with A.G.C. chapters on such clauses, the A.G.C. Committee on Highways and Airports announces.

**A.A.S.H.O.-A.G.C.** joint cooperative committee will meet March 7 in connection with annual convention of the Highway Officials of North Atlantic States at Atlantic City, New Jersey, and on March 10 during annual meeting of Mississippi Valley Conference of State Highway officials in Chicago.

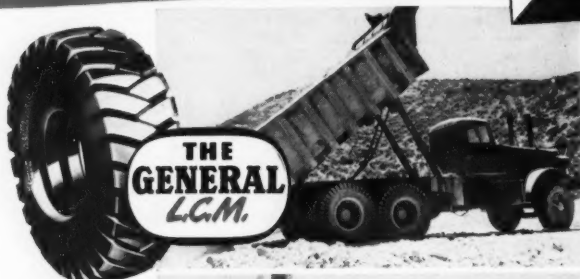
**Government executives** charged with making critical decisions regarding construction are to discuss their programs at 32nd annual convention of A.G.C. in Boston, February 26-March 1. (Page 67)

**Civil defense** recommendations for construction industry are set forth in a report made by A.G.C. at request of the Federal Civil Defense Administration. Association worked with National Security Resources Board on problem before establishment of new agency. (Page 42)

**L. C. Rogers** of Bates & Rogers Construction Corporation, A.G.C., Chicago, and S. L. Fuller of the John F. Casey Company, A.G.C., Pittsburgh, have been selected as representatives of industry at the International Labor Organization meeting in Geneva, Switzerland, February 12-24, 1951. They will take part in the deliberations of the committee on Building, Civil Engineering and Public Works. Mr. Rogers is chairman and Mr. Fuller a member of the A.G.C.'s Labor Committee.

# GENERALS

do any job, anywhere—  
**FASTER! EASIER!  
AT LOWER COST!**



## GENERAL L. C. M.

For most work off the road, some on. Broad, deep lugs and thick, rugged shoulders prevent cuts, snags, bruises. More rayon cords, more rubber for extra carcass strength.



## GENERAL H. C. T.

Designed for most work on the road, some off. Long-wearing safety tread and reinforced shoulder cleats give more traction, more original and recap miles.



## GENERAL DUAL TRACTION LUG

To move more yards of dirt, the General Dual Traction Lug digs deep for more traction in soft going, forward or backward. Makes heavy jobs easy.



## GENERAL TRACTOR GRADER TIRE

For power wheels—sharp, diagonal, self-cleaning tread bars for maximum traction, forward or backward. For front wheels—easy steering, smooth riding ribs.

**SPECIFY GENERAL TIRES ON YOUR NEW EQUIPMENT**



## A Series of Graphs Outlining the Construction Trend

Compiled by The Associated General Contractors of America

### TREND OF CONSTRUCTION COSTS

The average of construction costs in the principal construction centers of the United States for January stands at Index Number 374, according to the A.G.C. Index. The cost figure for January 1950 was 345. The 1913 average equals 100.

### WAGE AND MATERIAL PRICE TRENDS

The average of wages in the principal construction centers of the United States stands at 497 for January. One year ago the average stood at 464. The average prices paid by contractors for basic construction materials for January stands at Index

Number 292. The average a year ago stood at 266. The 1913 average, again, equals 100.

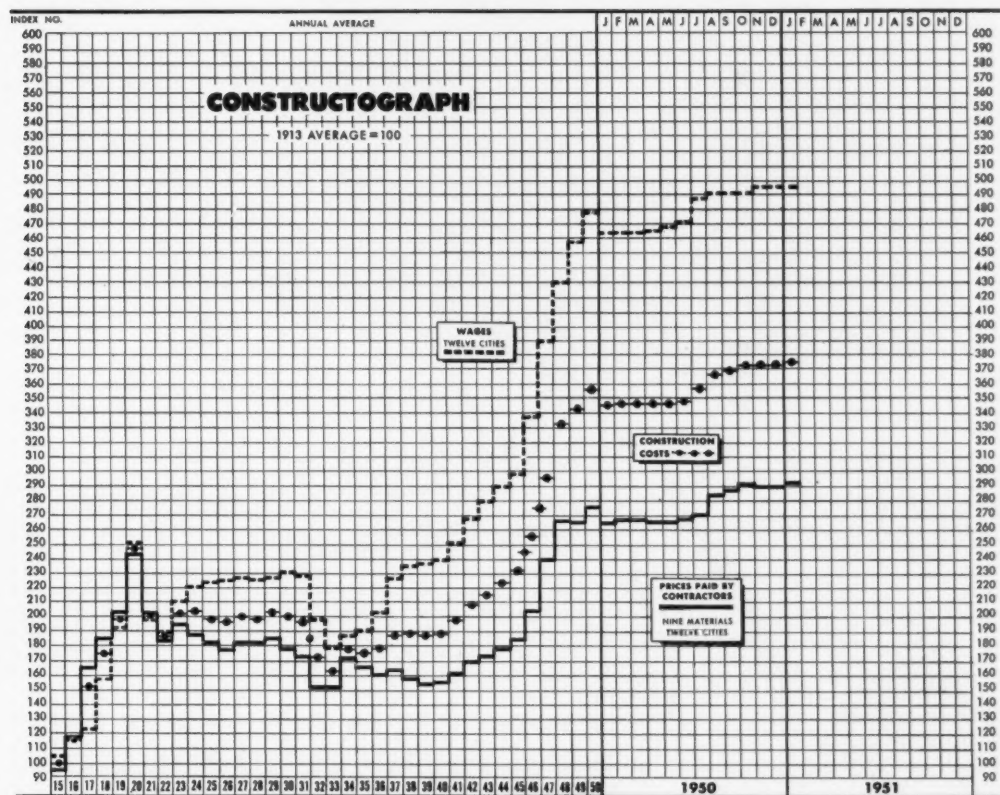
### CONTRACT AWARDS IN 37 STATES

The volume of contracts awarded during December (Index Number 239, based on 1936-1938) is an increase of 17 points from November, and an increase of 35 points from December 1949.

### REVENUE FREIGHT LOADINGS

Revenue freight loaded during the first 3 weeks of 1951 totaled 2,225,285 cars. For the same period in 1950, loadings amounted to 1,754,459 cars. This represents an increase of 26 per cent.

### ● Wage, Material Price and Construction Cost Trends



# *Start with a REAL ROCK SHOVEL ...and you'll be sure to finish the job!*



If you have a real Rock Shovel you'll never have to worry about output in any kind of digging. Start with a real Rock Shovel and you'll be sure to finish the job.

Northwests are proved Rock Shovels with advantages a Rock Shovel should have.

The Northwest Dual Independent Crowd utilizes force other independent crowd shovels waste. Cast Steel Machinery Bases and Cast Steel Machinery Side Frames are better able to take the strains of tough digging. The Cushion Clutch relieves all parts under power from shock loads and increases machine life and cable life. The "Feather-Touch" Clutch Control increases output, assuring easier operation and a *feel of the load* that makes it easier to handle the big ones. These are just a few of the many advantages you won't find in other shovels—just a few of the features that make money in the heart of the Rock Job. Put a Northwest in the *Key Spot* and be sure of the kind of service that makes one out of every three Northwests sold a repeat order.

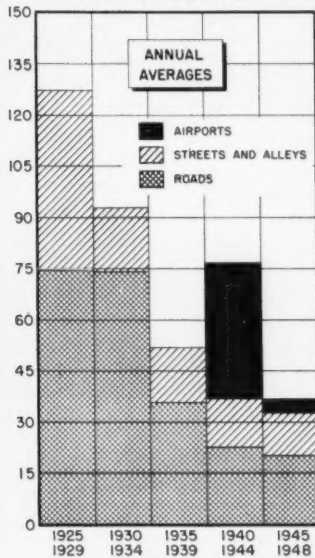
NORTHWEST ENGINEERING CO., 1502-8 Field Bldg., 135 South LaSalle St., Chicago 3, Ill.



## NORTHWEST

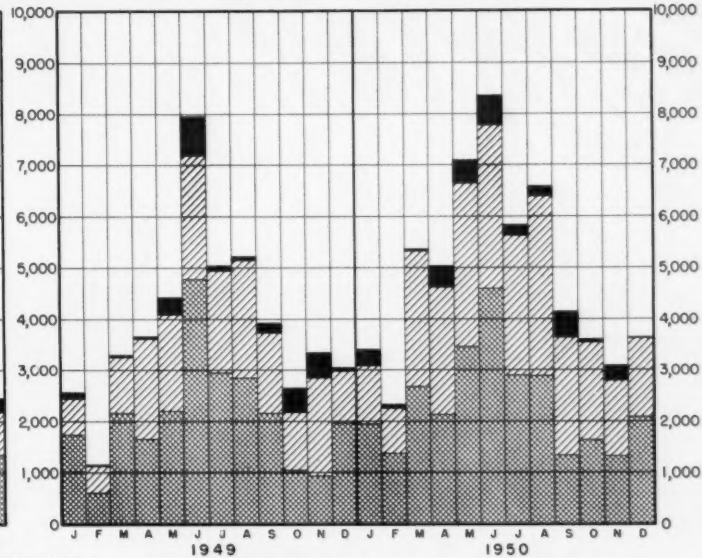
CRAWLER and TRUCK MOUNTED SHOVELS • CRANES • DRAGLINES • PULLSHOVELS

# ● Concrete Surface Pavement Awards MILLIONS OF SQUARE YARDS

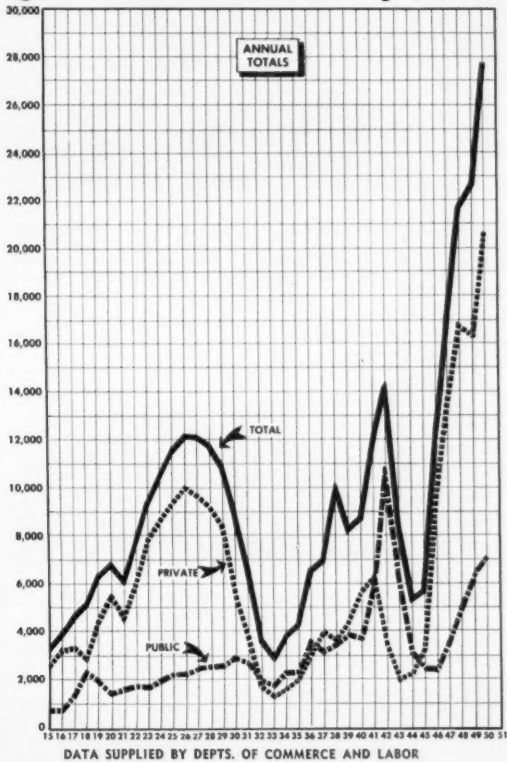


DATA SUPPLIED BY PORTLAND CEMENT ASSOCIATION

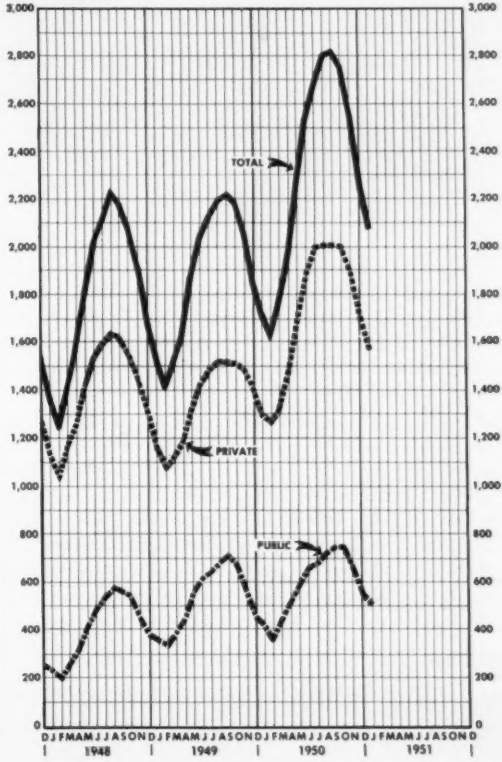
# THOUSANDS OF SQUARE YARDS



## ● New Construction Activity (MILLIONS OF DOLLARS)



DATA SUPPLIED BY DEPTS. OF COMMERCE AND LABOR



# EUCLID PERFORMANCE

*Pays Off*

**MORE LOADS PER HOUR  
MORE PROFIT PER LOAD!**



Illustration at left shows a Euclid scraper dumping approximately 20 cu. yds. of fill material at Hickory airport in North Carolina. Powered by a 275 h.p. diesel engine, this scraper has a top speed loaded of 28.2 m.p.h.



Above, a Rear-Dump "Euc" places 22 tons of earth and rock fill during construction of Chief Joseph Dam at Bridgeport, Washington. Other Euclids of this type have capacities of 10 to 34 ton payload, 125 to 400 h.p.

Engineered specifically for heavy off-the-highway hauling, Euclids are standard equipment on many construction and industrial jobs, quarry and open pit mining operations. Combining large capacity and high speed, "Eucs" haul more loads at less cost per load.

Continuous performance records on hundreds of the toughest jobs are evidence of the dependability and long life built into every Euclid. With payload capacities ranging from 10 to 34 tons or 6.6 to 50 cu. yds., there is a Euclid model for every type of job and material. Backed by a competent world wide distributor organization, Euclid equipment pays off in lower hauling costs.

Your Euclid Distributor will be glad to discuss the advantages of using Euclids for your off-the-highway hauling jobs. Call or write for information or a hauling cost estimate.

**The EUCLID ROAD MACHINERY Co. CLEVELAND 17, OHIO**



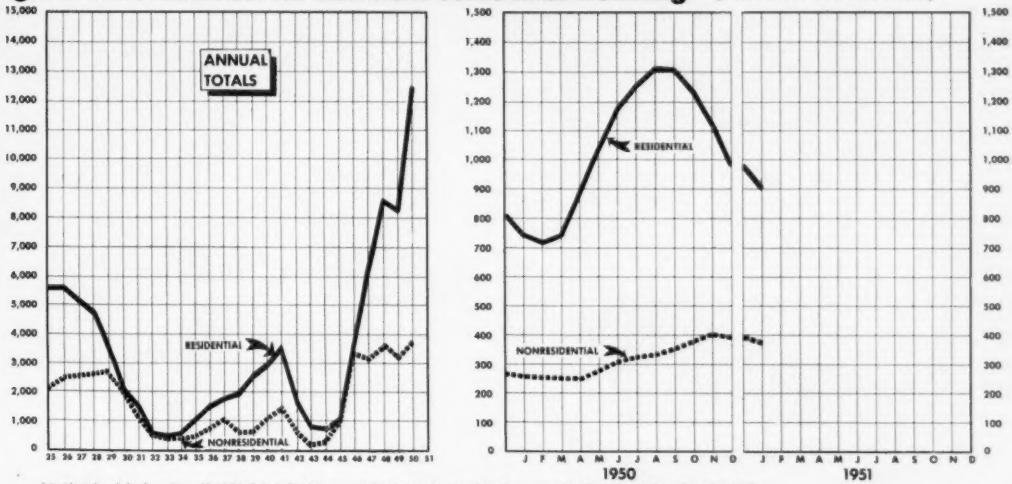
Carrying a heaped load of about 18 cu. yds., this Bottom-Dump hauls overburden at a big open pit bauxite operation in Arkansas. Bottom-Dump "Eucs" are powered by engines of 190 to 300 h.p., have capacities of 13 to 50 cu. yds.





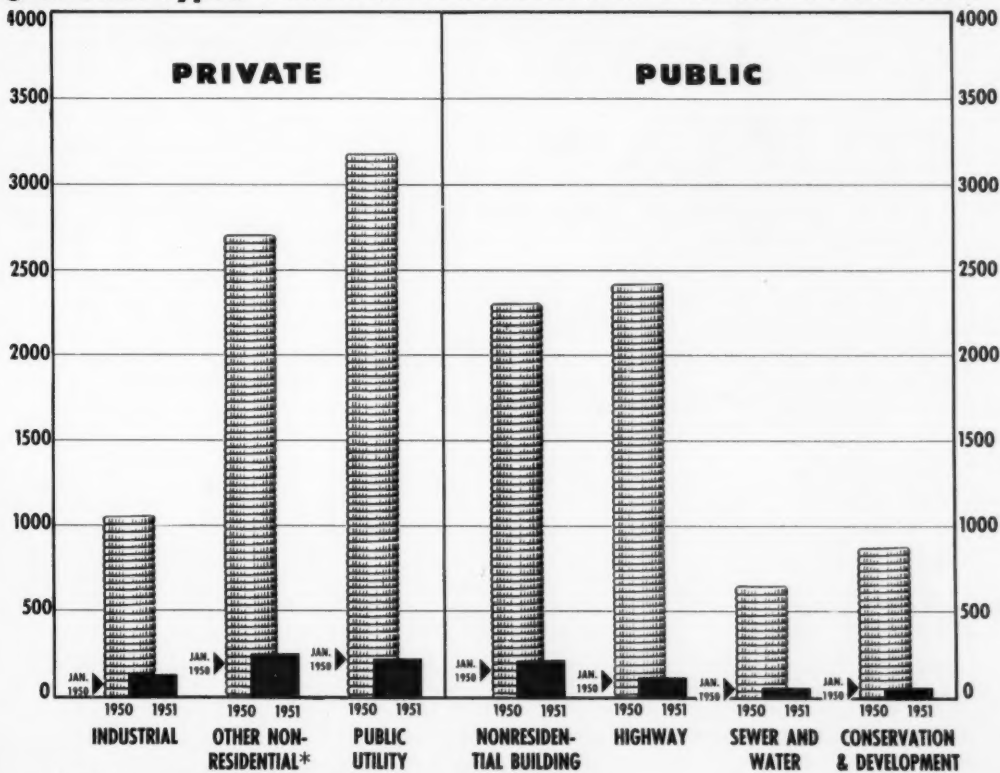
# NEW CONSTRUCTION ACTIVITY

## ① Private Residential and Nonresidential Building\* (MILLIONS OF DOLLARS)



\* Residential excludes farm; Nonresidential includes industrial, commercial, institutional, and social and recreational building, but excludes public utility buildings.

## ② Selected Types: (CUMULATIVE, MILLIONS OF DOLLARS) 1950 and 1951 VOLUME THROUGH JANUARY



\* Includes commercial, institutional, and social and recreational building

**now  
TWO MORE**

*Completely New*



*OUT AHEAD*

**Modern Allis-Chalmers Line  
sets New Tractor Standards**



Each of these four Allis-Chalmers crawlers gives you a new yardstick for rating tractors. Each brings you a new kind of performance . . . plus new strength, operator comfort and service simplicity. For the finest in crawler tractors, see your Allis-Chalmers dealer.

**ALLIS-CHALMERS**  
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.

*The World's Most Modern Line of Crawler Tractors*

# Allis-Chalmers Tractors

## NEW POWER RATING

POWER, WEIGHT, BALANCE put them in a class of their own — never such traction... such pulling, pushing or lifting ability. And the smooth-operating GM 2-Cycle Diesel engines work without strain under the most extreme conditions.

## NEW STRENGTH

All parts are designed and built to carry their loads with a margin of safety. No need to go to a larger tractor just for strength alone. The HD-9 and HD-15 set new standards for tractor quality.

- ✓ For Greater Production
- ✓ For Easier Operation
- ✓ For Simplified Servicing

## NEW DESIGN SIMPLICITY...

for Easier Control and Greater Operator Comfort — Easy-shift transmission • Self-energizing brakes • Booster steering controls • Adjustable, cushioned seat • Wide arm rests • Convenient controls and pedals • Full visibility • Instant electric starting.

for Simplified Servicing — Unit construction permits removing major assemblies without disturbing companion groups • Extended lubrication periods throughout — 1,000 hours on truck wheels, idlers and support rollers.

Complete Line of Matched Equipment,  
Developed in Cooperation With  
Allied Manufacturers, Available  
For Both The HD-9  
and HD-15.

# HD-15

WEIGHT: 27,500 lb.  
102 DRAWBAR Wp.  
GM 6-71 DIESEL ENGINE  
SPEEDS: 6 forward, to 5.80 mph;  
3 reverse, to 4.51



## LAKEWOOD PARK CALIFORNIA

World's Largest Planned  
Community Development

Situated ten miles southeast of Los Angeles, Lakewood Park covers roughly ten square miles—will have a population of more than 65,000 within two years. Project calls for over 17,000 homes, a 153-acre shopping center, schools, churches, parks and playgrounds. Lakewood Park Corporation is a joint venture firm composed of two long-established building contractors: Actna Construction, Inc., and Biltmore Homes, Inc.

# WORLD'S BIGGEST Home Building PROJECT

## speeded up with 365 SKIL Saws!

Here's what they say at  
Lakewood Park about this  
tremendous project

*Lakewood Park*

SKILSaw, Inc.,  
5033 Elston Ave.,  
Chicago, Ill.

Gentlemen:

When we started Lakewood Park, the largest planned community in the world, consisting of over 17,000 two and three bedroom homes, one of our first moves was to order three hundred and fifty Model 825 SKIL Saws and fifteen Model 315 SKIL Radial Saws.

As long users of SKIL Saws, we knew we could depend on them to stand up in the toughest service and help us meet our schedule of fifty homes per day. We knew there would be a minimum of repair service and abuse.

After the construction of six thousand units, our confidence was more than justified and our men prefer SKIL Saw five to one, over any other portable saw.

Sincerely,  
LAKWOOD PARK

**SKIL**  
PORTABLE TOOLS

**SKIL Saws used exclusively to build 6,000 homes in 245 days... with 11,000 more to come!**

**It's smart to standardize on SKIL Saws! Performance-proved to produce under pressure!**

Talk about field-proved performance! Imagine—hundreds of days of steady construction! Hundreds of carpenters working at peak efficiency; against time; under all conditions. Saws constantly changing hands... cutting wet wood and dry... absorbing weeks of punishment in a single day! And yet SKIL Saws stayed on the job—kept delivering day-in, day-out... month after month. *What better test can you think of for any saw?*

Follow the example of Lakewood Park builders and other prominent builders everywhere. *Standardize on SKIL Saws on your next job!* You'll save important time and money through fast, easy interchangeability of parts; minimum blade inventory; quick efficient repair service from a near-by SKIL Service Branch... and *famed SKIL Saw performance.*

Ask your SKIL Tool Distributor to demonstrate these powerful, easy-to-handle, performance-proved SKIL Saws today!

SKIL Products are made only by

**SKILSaw, Inc.**

**5033 Elston Avenue • Chicago 30, Ill.**

Factory Branches in Principal Cities

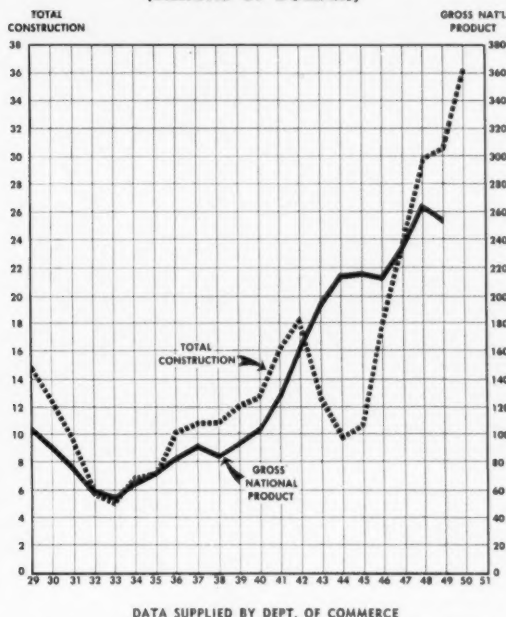
In Canada: SKILTOOLS, LTD., 66 Portland St., Toronto, Ont

Over 171 million feet of roof lumber and more than 137,000 square yards of sub-flooring will go into Lakewood Park—and Model 825 SKIL Saws cut all of it!

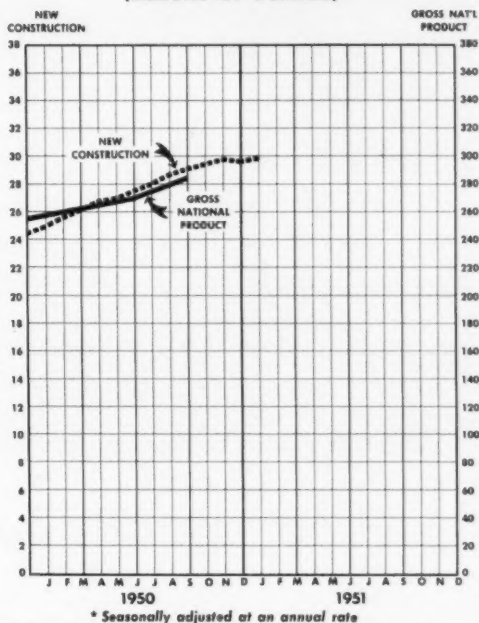
For top production sawing at Lakewood Park, SKIL Radial Saw pre-cuts and gang-cuts easily, accurately and at top speed!



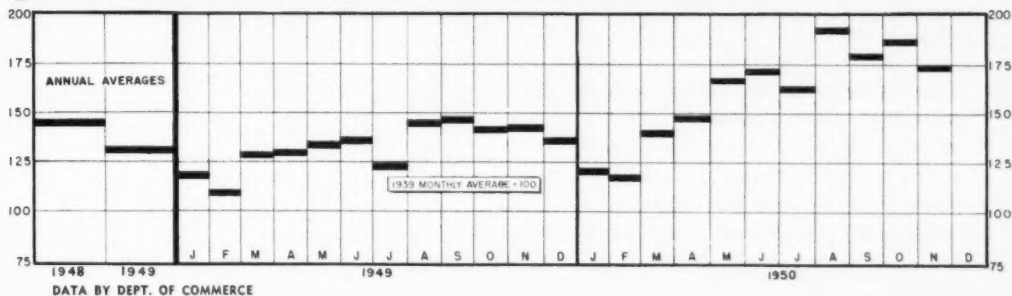
● **TOTAL Construction compared with Gross National Product**  
(BILLIONS OF DOLLARS)



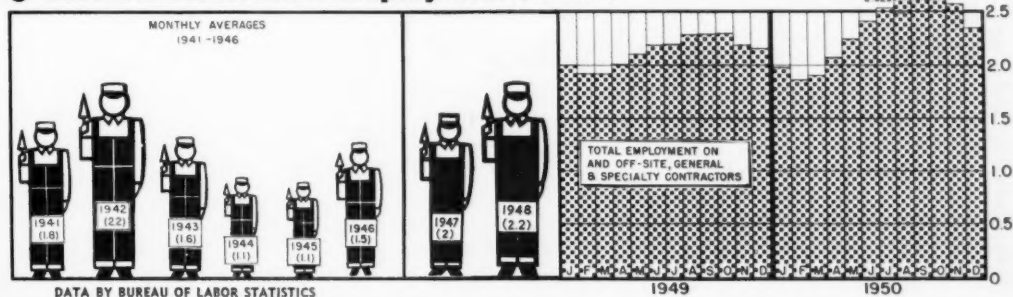
● **NEW Construction compared with Gross National Product\***  
(BILLIONS OF DOLLARS)

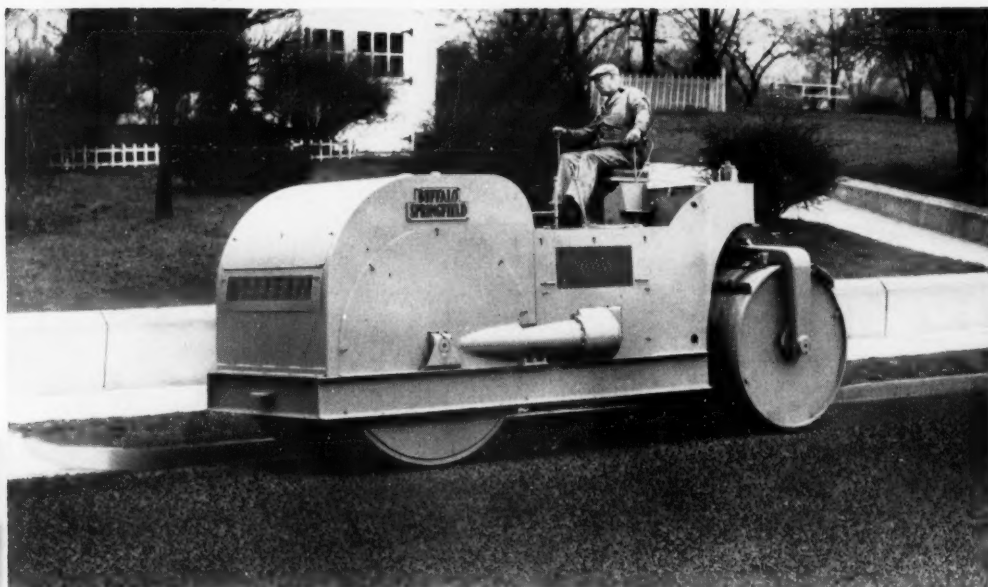


● **Materials Index: COMPOSITE PRODUCTION INDEX OF 20 MATERIALS**



● **Contract Construction Employment (MILLIONS)**





## How to smooth out your...BUDGET PROBLEM

When a roller purchase is made, two important variables always come into balance—(1) job requirements of the equipment, and (2) expenditure limitations of the purchaser's budget.

Sometimes, job or performance requirements come first, and initial product cost is secondary. At other times, initial cost must come first. The final selection is easier if quality of product is available over a wide price range. That's why Buffalo-Springfield has added a new series of Standard Tandems to its famous Heavy Duty\* Tandem line.

These new units—reflecting the quality of manufacture and design always associated with Buffalo-

Springfield—have been built for long-term dependable performance and lowest-cost operation. Where job requirements are not unusual, or initial cost is the controlling factor, the Standard Tandem is recommended. For wide job versatility and extra ruggedness to meet the most severe operating conditions, the Heavy Duty Tandem remains in a class by itself. Compare *either* line with any other rollers made. You will find Standard Tandem better—the Heavy Duty Tandem best.

Ask your Buffalo-Springfield distributor to help you solve your budget vs. performance problem—by suggesting the model that best meets *both* these requirements.

\*B Series.



### MAIL THIS COUPON TODAY

THE BUFFALO-SPRINGFIELD ROLLER CO.

Dept. A-2, Springfield, Ohio

☐ Please send me Catalogue S-57-49 describing the right model for my requirements. ☐ Notify Distributor to call.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

**For Moderate Income Families in Large Cities**

(Formerly referred to as the "Cost of Living Index," compiled by the Bureau of Labor Statistics)

This table indicates the average changes in retail prices of selected goods, rents and services bought by the average family of moderate income from October 15, 1948 to December 15, 1950.

They are presented here for use by employers who may wish to take these cost of living data into consideration when contemplating adjustments of wages based on increased living costs.

The Bureau of Labor Statistics surveys 10 key cities every month and 24 other large cities quarterly. Prices are obtained on food, fuel, apparel, house furnishings and miscellaneous goods and services. Rental information is obtained quarterly only for all cities. The computations are based on the indexes for the years 1935-39, which are taken as the average of 100 points.

	1948			1949			1950		
	OCT. 15	NOV. 15	DEC. 15	OCT. 15	NOV. 15	DEC. 15	OCT. 15	NOV. 15	DEC. 15
Average.....	173.6	172.2	171.4	168.5	168.6	167.5	174.8	175.6	178.4
Birmingham, Ala.....	176.9	175.0	174.8	170.3	170.5	168.4	179.1	180.3	184.0
Mobile, Ala.....	.....	.....	173.5	.....	.....	167.4	.....	.....	176.6
Los Angeles, Calif.....	171.8	172.2	172.7	166.5	166.6	165.4	171.3	173.2	175.8
San Francisco, Calif.....	.....	.....	176.7	.....	.....	171.5	.....	.....	182.8
Denver, Colo.....	171.0	.....	.....	164.6	.....	.....	172.8	.....	.....
Washington, D. C.....	.....	167.1	.....	.....	166.2	.....	.....	171.9	.....
Jacksonville, Fla.....	.....	.....	176.2	.....	.....	175.5	.....	.....	186.5
Atlanta, Ga.....	.....	173.7	.....	.....	170.5	.....	.....	178.9	.....
Savannah, Ga.....	178.4	.....	.....	173.4	.....	.....	181.6	.....	.....
Chicago, Ill.....	178.1	175.9	175.4	174.4	175.3	173.2	180.4	180.6	184.1
Indianapolis, Ind.....	178.0	.....	.....	172.1	.....	.....	179.8	.....	.....
New Orleans, La.....	.....	176.6	.....	.....	173.3	.....	.....	178.5	.....
Portland, Maine.....	.....	.....	167.1	.....	.....	162.8	.....	.....	171.4
Baltimore, Md.....	.....	.....	174.0	.....	.....	170.9	.....	.....	180.7
Boston, Mass.....	167.8	166.7	164.7	164.1	164.0	162.7	169.4	169.6	171.2
Detroit, Mich.....	174.6	173.1	172.8	168.7	169.8	169.1	177.7	179.2	181.0
Minneapolis, Minn.....	.....	.....	170.8	.....	.....	167.4	.....	.....	178.8
Kansas City, Mo.....	167.5	.....	.....	161.1	.....	.....	167.4	.....	.....
St. Louis, Mo.....	.....	.....	171.1	.....	.....	167.8	.....	.....	180.2
Manchester, N. H.....	176.5	.....	.....	169.3	.....	.....	176.2	.....	.....
Buffalo, N. Y.....	172.7	.....	.....	167.4	.....	.....	173.0	.....	.....
New York, N. Y.....	171.7	171.0	169.2	165.9	165.8	164.9	171.0	172.1	175.1
Cincinnati, Ohio.....	175.5	173.8	172.2	168.7	168.3	167.8	176.0	176.0	178.7
Cleveland, Ohio.....	.....	176.2	.....	.....	170.3	.....	.....	178.6	.....
Portland, Ore.....	180.1	.....	.....	173.6	.....	.....	183.4	.....	.....
Philadelphia, Pa.....	174.1	171.7	170.6	168.9	168.6	167.3	173.8	174.1	178.2
Pittsburgh, Pa.....	177.1	175.9	174.9	171.1	171.3	170.3	179.2	178.9	180.8
Scranton, Pa.....	.....	169.4	.....	.....	166.3	.....	.....	173.7	.....
Memphis, Tenn.....	.....	.....	174.3	.....	.....	170.8	.....	.....	180.2
Houston, Texas.....	174.7	173.9	173.8	172.0	173.3	173.2	179.9	181.1	184.8
Norfolk, Va.....	.....	174.0	.....	.....	168.2	.....	.....	177.0	.....
Richmond, Va.....	170.0	.....	.....	164.9	.....	.....	171.6	.....	.....
Seattle, Wash.....	.....	174.3	.....	.....	171.6	.....	.....	180.8	.....
Milwaukee, Wis.....	.....	171.2	.....	.....	168.4	.....	.....	179.1	.....

# At Last! an all-material, heavy-duty car unloading team!

*Cuts unloading—stockpiling time as much as 90%*



**EXCLUSIVE NEW  
ADVANTAGES!**

358 Unloader



363 Stock-  
piler-Loader



**For All Materials . . .** Crushed stone, granite chips, sand, gravel, agricultural lime, coal, road stone, coke, foundry sand, cinders, clay, chemicals, fertilizers, ores, wet concrete, etc.

**For All Users . . .** Road contractors, building supply yards, concrete products plants, foundries, quarries, railroads, ceramic plants, industrial power plants, chemical plants, etc.



**Barber-Greene**  
BARBER-GREENE COMPANY  
AURORA, ILLINOIS

Imagine a portable car unloader and stockpiler that can clear a car of stone or rock in 45 minutes! Imagine an unloading "team" that requires only one man's time . . . that frees expensive clamshells and other equipment for more productive work . . . a team rugged enough to deliver up to three tons per minute through years of service, yet economical enough to pay off on intermittent work!

That's what Barber-Greene offers you in the new 358 and 363. Now for the first time you can truly eliminate hopper-car unloading problems, no matter what bulk materials you're handling!

*Send for Full Details!*

Use the coupon, or write for complete data, photos and specs on the 358 and 363.

Barber-Greene Company  
Aurora, Ill.

- ☐ Send details on the 358 and 363  
☐ Have a B-G representative call

Name .....

Street .....

City..... State.....



## Sidelights for Contractors

By John C. Hayes, Legal Adviser

### Taxes

**Excess Profits Tax.**—The President has signed the Excess Profits Tax Act of 1950. Effective retroactively to July 1, 1950, the Act increases the normal tax for corporations from a rate of 20 percent to one of 22 percent, which added to the 25 percent surtax, results in a combined rate of 47 percent, with a further tax of 30 percent applicable to "excess" profits. The total effective rate of 77 percent on excess profits is limited by a stipulation that the total of such taxes, plus any 2 percent penalty tax for filing consolidated returns, shall not exceed 62 percent of a corporation's net income. (An explanation of the Act is set forth at page 31, entitled "Excess Profits Tax Act of 1950.")

### Tax Extension for Military Personnel.

—By amendment to section 3804 of the Internal Revenue Code, members of the armed forces, or individuals serving in support thereof, in a combat area, or hospitalized outside of the States of the Union and the District of Columbia as a result of serving in such an area, are granted extensions of time for the filing of tax returns, payment of taxes, etc., extending for the length of service in such an area, or for such hospitalization, and the next 180 days thereafter.

**Sale of Equipment.**—Where a partnership sold certain construction equipment, which had been rented out a number of times, under rental agreements with option to purchase or with recapture provisions, the tax court decided that such machinery had been held primarily for rental rather than for sale, that the gain on the sales was capital gain, and that the "rentals" received in the year of sales also should be considered as part of the sale price since such payments exceeded depreciation and gave the payors an equity in the equipment.

**Sale of Grove or Orchard.**—On a sale for a lump sum by the operating owners of a California citrus grove property, comprising land, trees, and a growing crop of oranges on the trees, the tax court has ruled that the

crop is not part of the property used in the owner's trade or business but constitutes property held primarily for sale and that the portion of the selling price attributable thereto is ordinary income, rather than capital gain. In a similar case arising in Florida, a district court reached the contrary conclusion that the entire gain could be treated as from sale of a capital asset.

**Truck Fines.**—Revoking a previous announcement to the contrary, the Commissioner of Internal Revenue has published a ruling that fines imposed on truck operators for violating state laws limiting weights, loads, or size of trucks are not deductible for income tax purposes. The previous ruling had been based on the belief that such fines were comparable to toll charges rather than penal fines, but on reconsideration the Commissioner found the reverse to be true. The new ruling is effective as to fines paid or incurred after December 1, 1950, the date of announcement.

**Family Partnerships.**—A court of appeals has found that a father and his son and two daughters really intended to carry on a business as partners and that the business income should be taxed to the partners according to their respective interests, although the children performed no services for the partnership and their capital contribution originated as gifts from their father and mother. The gifts were unconditional, the children had control over partnership assets and their share of income, and the firm was registered and dealt with as a partnership.

**War Loss.**—Notwithstanding that taxpayers' property in Shanghai, China, which was taken over by the Japanese in 1941, was recovered unharmed in 1945, a court of appeals decided that section 127 of the Internal Revenue Code creates a conclusive presumption that the property was a complete loss in 1941. Thus, any deduction for depreciation thereon in 1944 was denied, without regard to whether or not taxpayers had claimed the loss in the earlier year.

**Estate Tax.**—A wife's interest in property held with her husband as joint tenants is not includible in the husband's taxable estate, a circuit court ruled, despite the fact that the wife purchased her interest with profits and income realized from property originally received by her from her husband as a gift.

### Miscellaneous

**Price Cutting.**—The Supreme Court has determined that it is a complete defense to a charge of unlawful price discrimination under the Robinson-Patman Act that a lower price made by a seller to certain buyers was offered to retain them as customers and in good faith to meet an equally low price of a competitor.

**Apprenticeship Requirements.**—The provisions of the Illinois Plumbing License Law requiring a person seeking a master plumber's license to serve five years with a licensed master plumber as an apprentice and five years as a journeyman plumber, have been held by the Illinois Supreme Court to be unconstitutional. The statute puts the licensed master plumber in absolute control of the situation, the court points out, and amounts to a taking of liberty and property without due process.

**Assignment of Claims.**—The Comptroller General states that he has not yet ruled on any right that the United States may have to recover renegotiation claims from a contractor's assignee who took under the Assignment of Claims Act of 1940. However, he calls attention to the fact that section 301 of the Defense Production Act of 1950 should adequately protect financing institutions against the risk of loss on loans guaranteed thereunder, regardless of their rights under assignments.

**Price Control.**—"Immunity from federal regulation is not gained through forehand contracts," states a circuit court, in holding that a sales contract was subject to price controls instituted after the contract was entered into but before delivery and payment were effected.

# OUT AHEAD

with **GM DIESEL POWER!**

**HD-20**—41,800 lbs. of properly balanced weight; long, wide sure-gripping tracks and the new GM 6-110 Diesel engine driving through hydraulic torque converter give the Allis-Chalmers HD-20 brute strength to take toughest jobs in stride.



**HD-15**—27,500 lbs.—102 Drawbar H.P.—powered by a 6-cylinder GM Series 71 Diesel engine.



**HD-9**—18,500 lbs.—70 Drawbar H.P.—powered by a 4-cylinder GM Series 71 Diesel engine.

General Motors 2-cycle Diesel engines supply the hard-hitting power that enables Allis-Chalmers' great new line of tractors to outwork all others.

Four and six-cylinder GM Series 71 engines driving the HD-9 and HD-15—and the powerful new GM 6-110 engine driving the HD-20—give these new tractors a reserve of smooth, dependable power for easy handling, increased work and minimum maintenance.

The greater efficiency of 2-cycle operation and direct fuel injection simplifies design and enables these engines to produce far more horsepower than other Diesels of equal size and weight. Interchangeability of Series 71 engine parts provides maximum availability—keeps them on the job.

That's why GM Diesel engines are chosen to power not only the "World's most modern line of crawler tractors"—but more than 500 different kinds of machinery built by 120 manufacturers.

## DETROIT DIESEL ENGINE DIVISION

SINGLE ENGINES... Up to 275 H.P. **DETROIT 28, MICHIGAN** MULTIPLE UNITS... Up to 800 H.P.

**GENERAL MOTORS**

**DIESEL BRAVN WITHOUT THE BULK**



## The Mobilization Program

GENERAL CONTRACTORS will find it to their advantage to be considering how further controls in the mobilization program will affect their daily operations.

By or before spring, additional controls will be put into effect which will have both direct and indirect influences upon construction operations.

Final decisions on the timing and exact details of the various measures have not yet been made so that specific information cannot be given. But assurance has been given to officials of The Associated General Contractors of America that additional controls are inevitable.

Before considering the type of controls it is appropriate to consider the pattern of the mobilization program so far. Although the program may seem confused, it is more accurate to describe it as complex with a vast amount of coordination required.

The men in charge, from Charles E. Wilson, who retired as president of the General Electric Company to become director of the Office of Defense Mobilization, to others in minor posts are competent men, most of whom had similar experience during World War II. Advantage is being taken of the experiences of the past, and most previous mistakes are being avoided.

In construction, most of the men now in responsible government positions have had previous experience in mobilization programs, have a sound understanding of the industry, are familiar with the A.G.C., and seek sound advice on their problems.

The A.G.C. has given, and will continue to give, counsel on mobilization problems relating to construction. The association will continue to give advice based on the best available information and make recommendations which are in the public interest. So long as this policy is adhered to, its advice will be sought and its recommendations given consideration.

Sometimes government executives, through pressure of public opinion or otherwise, are required to take certain actions before they can be coordinated with others. In these cases, every effort has been made to rectify injustices or unnecessary complications as soon as possible.

The executives understand that one of the principal purposes of the mobilization program is to make the nation stronger industrially, and every effort is made to devise the controls so that they have the least possible harmful effect while they channel a greater portion of our productive capacity to defense needs.

As the mobilization program continues to expand, it is inevitable that the pinch in materials will become tighter. By or before spring it is likely that there will be a controlled materials plan by which the basic metals, such as steel, copper, aluminum and others, will be allocated for the most part to defense or other essential needs.

This will make it somewhat easier for contractors to secure materials for defense and other essential projects. But it will be more difficult for contractors to secure materials to complete non-essential projects.

It is likely that about the time a controlled materials plan goes into effect there will be established a system whereby a permit will be required for the commencement of each new construction project, similar to what was done during the last war under Order L-41.

The National Production Authority last fall announced the policy of not halting projects commenced when it was legal to do so. This, however, does not imply any commitment by NPA that materials will be available for the completion of such projects.

When the allocations of materials to defense and other essential uses does start, there probably will be extra materials available for completion of projects underway. But the contractor should be prepared for difficulty in securing them.

## Don't Let It Happen Again

THE IMPORTANCE of highways in our national defense can not be questioned. Their value in the fast and sure transfer of goods to railheads and ports was demonstrated over and over again in World War II. As the direct result of heavy wartime traffic over highways that had insufficient maintenance, America's system of roads fell far behind and has never caught up with the nation's demands. Something over a year ago a Congressional committee estimated that it would require \$51 billion and at least ten years to bring our highways to a point where they could take care of the rapidly mounting peacetime volume of traffic. That is the highway picture as it appears today.

In the light of this state of affairs, the budget message of the president is worthy of consideration. With heavy emphasis laid on all matters of defense, practically the same amount as last year was recommended for highways. While the message admits that long-range improvements in all classes of roads are necessary, it goes on to say that in reviewing state and local requests for federal aid, the Bureau of Public Roads will stress the needs of the National System of Interstate Highways and the principal urban roads that connect with it. This would indicate that the secondary and farm-to-market roads will have to go begging for the period of the emergency in spite of their importance to the country's economy.

Highways are expendable. No matter what their use, they wear out and must be repaired to maintain their value to the communities they serve. The requirements of war put an added burden upon them. In planning for defense, it would seem only fair to make certain that this vital means of transportation was adequately financed. Increasing the appropriation for highways at this time is a defense measure.



Bridge over the Mississippi River, Hastings, Minnesota, 2600 tons fabricated and erected.

# built by down-to-earth methods saves you money, saves you time!

## 3 HUGE FABRICATING PLANTS OPERATE AS A UNIT

- Clinton Bridge Corporation
- Gage Structural Steel Corporation
- Midland Structural Steel Corporation

*The bridge you see here in the course of construction is over the mighty Mississippi River at Hastings, Minnesota.*

*Have you noticed what's different about the erecting technique? Sure you have . . . it's the speedy water-level method of raising and joining the members, instead of the usual slow inching of erecting derricks over newly laid sections at the bridge floor level.*

*Exclusive construction innovations, with modern fabricating short cuts which can be carried on simultaneously in 3 plants operating as a huge manufacturing unit, combine to save you time and money.*

*Our engineering-estimating department would like to quote on your jobs wherever fabricated structural steel is specified. Send your plans and specifications to us.*



Fabricators and erectors of structural steel for highway and railroad bridges; Industrial, office, school, and government buildings; Airport structures; Harbor facilities.



» DEFENSE and civilian mobilization took a sharp turn toward a completely controlled economy in January with the issuance of stopgap wage and price controls. There were these developments:

- Stopgap orders were issued simultaneously effective at midnight January 25, freezing prices at maximum levels attained between December 19 and January 25, and wages at the maximum in effect January 25. The order was issued a few days after Eric Johnston replaced Alan Valentine as Economic Stabilization Administrator due to the latter's reluctance to issue wage-price controls before effective enforcement could be made.

- Immediately, the Economic Stabilization Agency began "unfreezing" certain items. A week after the original orders had been issued, wages negotiated prior to January 25 were permitted to go into effect, principally affecting the coal miners, and ceilings were relaxed on coal prices. Also, price ceilings were relaxed on military purchasing by the Government.

- A tentative plan for stabilization of wages and working conditions in the construction industry was under study by industry, government, and labor representatives following a meeting in Miami (Page 26).

- Virtually all new private commercial construction was brought under National Production Authority authorization, similar to the old Civilian Production Administration system of World War II and afterwards (Page 24). As a general policy, NPA announced it would not process authorizations between January 13 (effective date) and February 15, except in cases involving national defense, hardship, or emergency situations. Applications were made available at Commerce Department district and regional offices, to be filed with the latter. Projects involving up to \$1 million to be acted upon by regional offices, and higher sent to Washington.

- The Federal Reserve Board amended Regulation X on real estate credit control to cover multi-unit residences from three-family up (Page 25).

- Further extension of Regulation X to commercial construction, thereby putting many types under double control, was being considered early this month.

- Armed services began launching a billion-dollar base construction program in the United States and overseas, after clearing with Congressional

## Mobilization Moves Toward Fully Controlled Economy

- Stopgap Wage-Price Order Fluid
- Commercial Construction Curbed by NPA

committees. More than \$2.5 billion was appropriated for defense construction (Page 30).

- A \$3 billion defense housing program was under debate in Congress. It would provide loan aids to practically all homebuilding (Page 29).

- President Truman presented a \$71.6 billion budget to Congress for fiscal year 1952, the bulk of which is for defense. Included is about \$3.8 billion for civil public works. (Breakdown begins on Page 33.)

- Another emergency tax request, this time totaling \$10 billion, was submitted to Congress by the President on February 2, consisting of levies on individual income, corporations, and excises. This was expected to be followed later by another request in attempts to make up an estimated \$16.5 billion deficit. A lively fight was opening in Congress to pare the budget down and reduce tax necessities.

- Emergency powers for awarding and modifying contracts, substantially a re-enactment of Section 201 of the First War Powers Act, 1941, were granted the President (Page 28).

- A strengthened bill for renegotiation of defense contracts was passed by the House January 23 (Page 29). The A.G.C. was scheduled to present its views to the Senate Finance Committee that contracts awarded by open competitive bidding should not be covered, and that renegotiation should apply only to contracts directly related to national defense.

- The Federal Civil Defense Administration was created, with unprecedented powers to enable it to aid communities, and for which a large protective construction program is requested in the budget. (The A.G.C.'s report to the FCDA on how to effectively mobilize the construction industry in civil defense functions is reviewed on Pages 42-43.)

- Many more orders restricting the use of critical materials were issued by NPA. Of particular interest to contractors were the orders concerning steel and restricting the uses of copper and nickel, covering many construction items.

NPA Order M-22 as amended December 30 banned the use of copper after March 1 in the manufacture of a long list of products, many of interest to contractors, including: builders' hardware, roofing and roofing nails, pipe fittings, gutters and downspouts, weather stripping, grating, louvers and ventilators, ornamental metal work, store fronts, elevators and escalators, doors, door frames and door sills.

An amendment January 22 of M-1, NPA's basic order on steel, increased most percentage ceilings of products for which suppliers are required to accept "DO" rated orders, established specific inventory controls for most products at all levels of production and consumption, and added several others to the order.

In general, no more than a 45-day supply of steel may be received by a person. However, the 45-day limitation does not apply to those who order structural steel for use in construction, and who order it delivered cut to specifications for a project, and who normally keep such steel segregated for the specific project. But the order adds:

"Instead, no such person may accept delivery of such steel more than 45 days before it is scheduled to be fabricated or, if it is not to be further fabricated, before it is scheduled to be assembled."

The President last month established the Defense Production Administration, directly responsible to Defense Mobilization Director Charles E. Wilson. In this agency were centered powers from several existing agencies, including functions delegated under the Defense Production Act to the Departments of Commerce and Interior, and the Interstate Commerce Commission, and functions of the Agriculture Department relating to food for industrial needs.

The DPA is responsible for expansion of production, capacity and supply, and has taken over the authorization of necessity certificates for rapid tax amortization of defense plants, formerly handled by the National Security Resources Board. It has about

the same powers as did the old War Production Board, while ODM will determine general policies like the old Office of War Mobilization.

William H. Harrison was elevated to head DPA, and General Counsel Manly Fleischmann was appointed administrator of NPA, which will continue as a primary operating agency.

A Defense Mobilization Board also was established by the President January 3 to assist the ODM, consisting of Mr. Wilson as chairman; the Secretaries of Defense, Commerce, Labor, Treasury, Interior, and Agriculture; chairman of the Reconstruction Finance Corporation; NSRB chairman; and directors of the FRB.

### Controls Checklist

A monthly checklist of governmental regulations and developments. NPA materials orders:

**M-10** partially regulates the distribution of cobalt. Amended to allocate almost all the supply of cobalt.

**M-11** schedules rated orders for copper.

**M-12** provides for distribution of copper remaining after rated orders have been filled. Amended to restrict use of copper in a large range of products after March 1. Many construction items included.

**M-13** schedules rated orders for rayon yarn.

**M-14** provides for the distribution of nickel remaining after rated orders have been filled. Amended to permit use in only essential items. Many construction materials affected.

**M-15** provides for the distribution of zinc remaining after rated orders have been filled.

**M-16** schedules rated orders for copper scrap.

**M-17** schedules rated orders for various electrical component parts.

**M-18** schedules rated orders for hog bristles.

**M-19** controls distribution of cadmium from producer to distributor.

**M-20** establishes specific inventory limitations for iron and steel scrap.

**M-21** restricts to defense uses all but the "paint remover grade" of methylene chloride.

**M-22** regulates the distribution of aluminum scrap.

**M-23** schedules rated orders for carved cotton sales yarn.

**M-24** sets forth permitted uses of tin plate.

**M-25** places restriction on uses of

cans made from tin plate orterne plate.

**M-26** places restrictions on tin plate enclosures.

**M-27** specifies the amount of tin that may be contained in collapsible tubes.

**M-28** schedules rated orders for leather.

**M-29** prohibits for any other purpose the tanning of horsehide fronts and deerskins suitable for military uses.

**M-30** prohibits the use of tungsten in the manufacture of specified products.

**M-31** schedules rated orders for chlorine.

**M-32** schedules rated orders for chemicals.

**M-33** establishes specific inventory limitations for molybdenum.

**M-1** amended to further control steel.

**M-4** amended to halt virtually all new commercial construction until February 15 when such construction may continue only with NPA authorization.

**Delegation 5** makes the Secretary of Interior claimant for certain production facilities for minerals and metals. Issued December 18.

**Delegation 6** gives the Civil Aeronautics Administration authority to

apply ratings to direct government contracts and purchase orders for its procurement and construction programs. Ratings cannot be applied to construction equipment.

**National Emergency** declared December 16.

**Office** of Defense Mobilization established and Charles E. Wilson appointed as director December 16. ODM is the top agency in the government's emergency structure.

**Defense** Production Administration established January 3. Many of the powers of separate agencies grouped in this new one which is directly under ODM.

**Defense** Mobilization Board established January 3. It is the President's top advisory board on emergency matters.

**Regulation X** which governs credit for new construction of one- and two-family dwellings, amended January 12 to include control of credit for three- and four-family dwellings and for apartments and apartment hotels.

**Wages and Prices** were frozen January 26. Officials of the Economic Stabilization Agency stated that adjustments would immediately follow the sweeping orders. Price and wage regulations applying to the automobile and leather industries were revoked by the over-all controls.

## Nearly All Commercial Construction Curbed

### • Applications for NPA Approval Needed After February 15

TO further conserve construction materials needed in the defense mobilization program, the National Production Authority amended its basic construction order M-4 to establish a system of authorizations for virtually all new private commercial projects.

The amendment, effective January 13, prohibits the commencement of most commercial construction until February 15, after which date such construction may continue if authorized by NPA.

A Construction Industry Advisory Committee was called to Washington January 11 to discuss the forthcoming order with officials of NPA. Representatives of The Associated General Contractors of America who were on the advisory committee are President Walter L. Couse, Detroit; Vice President G. W. Maxon, Dayton; Vice President-Elect A. S. Horner; and H. C. Turner, Jr., New York.

NPA authorizations to construct projects in List B of the order will be issued if they meet basic requirements. Generally, the project must further the defense effort or be essential to public health, safety or welfare. Where these requirements are not met, authorization could be issued after consideration of the type and quantity of materials on hand and the need of the community at large for the proposed structure.

Authorizations will be granted where the project is necessary to supplement or furnish facilities in connection with activities of the Defense Production Administration, the Department of Defense or the Atomic Energy Commission.

Application forms have been made available at regional and district offices of the Commerce Department. The forms are to be returned to only the regional offices, which are author-

ized to make decisions on projects up to \$1 million.

### Construction Affected

Added to List A of the original order which prohibited construction of amusement projects is List B which contains the types of commercial construction temporarily prohibited and subject to continuance only upon NPA authorization.

The list includes any building, structure or project used for or in connection with any of the following: bank, credit institution, or brokerage establishment; community or neighborhood building; barber shop, beauty shop, mortuary and undertaking establishment, cemetery building, mausoleum, crematory, garage, service station, shoe repair shop, laundry, dry cleaning establishment, tailor shop; hotel, motel, motor court, tourist camp, trailer camp; loft building, office building; outdoor advertising sign; printing or duplicating establishment; restaurant; storage distribution, display or sale of consumer goods, for example, retail store, shopping center, wholesale establishment, gasoline filling station, drugstore, soda fountain, florist shop, green house; storage warehouse for personal effects.

### Some Exemptions

Specifically excepted from List B are wholesale food establishment, wholesale supply facility for fuel oil, gasoline or coal, gas distribution system and pipelines.

Construction commenced before midnight of January 13 is not affected.

If materials which are to be an integral and permanent part of the building or structure were incorporated on the site before the order became effective then the work is considered to have already commenced and is not prohibited. Pouring or placing of footings is sufficient.

Site preparations such as demolishing buildings, tearing out partitions or erecting fences, shanties and sheds do not constitute commencing construction.

Building maintenance and repair are exempted. Small construction jobs and improvements and modernizations where the cost does not exceed \$5,000 over a period of 12 consecutive months are also exempted.

Where the order works an unreasonable hardship, application for adjustment may be filed. Criteria used by NPA to consider an adjustment include the extent of work done incident

to the construction project, whether reconstruction is the result of fire, flood or other disaster, and whether new construction is necessitated by government condemnation.

### Regional Offices

Boston for New England; New York for New York and New Jersey; Philadelphia for Penna. and Delaware; Richmond for Virginia, W. Virginia, Maryland, D. C., and N. Carolina; Atlanta for Georgia, Tennessee, S. Carolina, Alabama, Mississippi, and Florida; Cleveland for Ohio, Michigan, and Kentucky; Chicago for Illinois, Wisconsin, and Indiana; Minneapolis for Minnesota, N. Dakota, S. Dakota, Montana; Kansas City, Missouri, for Missouri, Iowa, Nebraska, and Kansas; Dallas for Texas, Oklahoma, Arkansas, and Louisiana; Denver for Colorado, Wyoming, Utah, and New Mexico; San Francisco for California, Nevada, and Arizona; Seattle for Washington, Oregon, and Idaho.

### District Offices

Albany, N. Y.; Albuquerque, N.

Mex.; Baltimore, Md.; Birmingham, Ala.; Boise, Idaho; Bridgeport, Conn.; Buffalo, N. Y.; Butte, Mont.; Charleston, S. C.; Charlotte, N. C.; Chattanooga, Tenn.; Cheyenne, Wyo.; Columbia, S. C.; Columbus, Ohio; Cincinnati, Ohio; Davenport, Iowa; Des Moines, Iowa; Detroit, Mich.; El Paso, Tex.; Evansville, Ind.; Fargo, N. Dak.; Ft. Wayne, Ind.; Grand Rapids, Mich.; Hartford, Conn.; Houston, Tex.; Jackson, Miss.; Jacksonville, Fla.; Los Angeles, Calif.; Louisville, Ky.; Manchester, N. H.; Memphis, Tenn.; Miami, Fla.; Milwaukee, Wis.; Mobile, Ala.; Newark, N. J.; New Orleans, La.; Oklahoma City, Okla.; Omaha, Nebr.; Peoria, Ill.; Phoenix, Ariz.; Pittsburgh, Pa.; Portland, Ore.; Providence, R. I.; Raleigh, N. C.; Reno, Nev.; Rochester, N. Y.; St. Louis, Mo.; Salt Lake City, Utah; San Antonio, Tex.; San Diego, Calif.; San Juan, Puerto Rico; Savannah, Ga.; Spokane, Wash.; Syracuse, N. Y.; Tampa, Fla.; Toledo, O.; Trenton, N. J.; Tulsa, Okla.; Wilmington, Del.; Worcester, Mass.

## Credit Controls on Apartment Building

» RESTRICTIONS on real estate credit have been revised to include three and four-family and multi-unit residences.

The Federal Reserve Board amendment of Regulation X, effective January 12, applies to non-government aided loans, and is designed to strengthen current anti-inflationary measures. The Housing and Home Finance Agency and the Veterans' Administration have issued companion restrictions on government-aided loans.

Multi-unit residences are defined as apartment houses and apartment hotels. Rooming houses, hotels and motels are not included.

The original regulation issued October 12, based loan value on the sales price of the entire structure. This has been changed to provide that value is the sales value of the entire structure divided by the number of units.

For all types of credit subject to the regulation, including government-aided loans, the lender must take into account all credit previously extended in connection with the property and still outstanding, as well as the additional amount of credit sought by the borrower. Down payments must be made from the borrower's funds and

not from the proceeds of supplemental mortgages, personal loans, or other secondary financing in excess of the permissible loan value.

The regulation also applies to loans for major additions and improvements. A major improvement is one which exceeds \$2,500 and also exceeds \$1,500 multiplied by the number of units in the building. Costs are computed on the basis of 12 consecutive months and all repairs made in this period must be included.

Exempt from the provisions in the amendment are credit extended for firm commitments made before January 12, and construction loans made to subcontractors and other persons except the owners of multi-family units, which have maturities of 18 months or less. Short term construction loans to owners are subject to the controls.

Maximum loans for multi-unit residences range from 83 per cent of value for a family unit value of \$7,000 or less, to 50 per cent of value for a unit costing \$23,500 or more. Three and four-family units which were included in the amendment are covered by original loan schedules which were applied to one and two-family units.

## Tentative Plan Under Study For Construction Wage Policy

- Expected to Apply to All Industry Operations
- Many Changes Expected After Stop-Gap Order

» THE stop-gap General Wage Stabilization Regulation 1 was issued January 26 by Eric Johnston, Economic Stabilization Administrator.

At the same time steps were being taken leading toward the adoption of a workable plan for administering the national wage stabilization policy in the construction industry.

The general wage stabilization regulation was issued simultaneously with General Ceiling Price Regulation 1. The wage regulation provides:

"No employer shall pay any employee and no employee shall receive 'wages, salaries and other compensations' at a rate in excess of the rate at which such employee was compensated on January 25, 1951, without the prior approval or authorization of the Wage Stabilization Board. New employees shall not be compensated at rates higher than those in effect on January 25, 1951, for the jobs for which they were hired."

The wage stabilization regulation was admittedly of a stop-gap nature. In the statement of considerations published simultaneously, this appears:

"This regulation will be modified and implemented, from time to time, as the Wage Stabilization Board develops its wage stabilization policy. The Board will issue regulations governing the procedure for applying for modifications and adjustments."

Earlier during the month the nine-man Wage Stabilization Board had held a series of conferences with representatives from industry and labor groups which presented their views respecting the development of wage stabilization policies. A.G.C. representatives were included in delegations from both the Chamber of Commerce of the United States and the National Association of Manufacturers.

The wage regulation was signed by Administrator Johnston, but was not signed by Chairman Ching or other members of the Wage Stabilization Board. They have not yet completed their draft of the wage stabilization policies which are to be recommended by the board.

Within the next few weeks the board

is expected to issue a series of orders, interpretations, and procedural regulations supplementing the general wage stabilization regulation.

### Construction Industry

A tentative plan to stabilize wages and working conditions in the construction industry is now being studied by employer, labor and government groups.

The plan, when adopted, is expected to apply to all construction operations for both defense and civilian purposes.

Proposals of the Building and Construction Trades Department of the American Federation of Labor form the basis of the plan. Its executive council discussed the proposals with representatives of the A.G.C. and national associations of specialty contractors in Miami on January 18.

The A.G.C. was represented by members of the Policy and Negotiations Subcommittee of the Labor Com-

mittee. Those in attendance were Lester C. Rogers and Arthur H. Wells, both of Chicago who are chairman and vice-chairman of the Labor Committee; Carl B. Jansen, Pittsburgh, former committee chairman; and Frank J. Rooney, Miami; and J. D. Marshall, assistant managing director. William E. Dunn, A.G.C. labor staff, also attended.

Mr. Marshall is a member of an employer-labor committee which was selected to discuss the plan with federal stabilization officials.

The plan calls for the creation of a board of nine members, equally divided among representatives of employers, labor and the public. This would be similar to the Wage Adjustment Board of World War II which acted on behalf of the National War Labor Board to stabilize wages and working conditions in the construction industry.

The board would stabilize wages in construction in accord with national policies established by the over-all Wage Stabilization Board, and would adjust disputes on wages and working conditions.

No change is contemplated in operations of the present National Joint Board for the Settlement of Jurisdictional Disputes.

The time when such a plan will be put into operation cannot be predicted.

### Wage Stabilization Reg. 1

Section 1. *General stabilization of wages, salaries and other compensation.* No employer shall pay any employee and no employee shall receive "wages, salaries and other compensation" at a rate in excess of the rate at which such employee was compensated on January 25, 1951, without the prior approval or authorization of the Wage Stabilization Board. New employees shall not be compensated at rates higher than those in effect on January 25, 1951, for the jobs for which they are hired.

Sec. 2. *Other existing regulations and orders superseded.* The provisions of this regulation shall supersede the provisions of existing wage regulations and orders of the Economic Stabilization Agency. Wage Procedural Regulation No. 1 is hereby revoked.

Sec. 3. *No rates below May 24-June 24, 1950, period.* Nothing in this regulation shall be construed to require the stabilization of wages, salaries and other compensation for any job at a rate less than that paid during the

period from May 24, 1950, to June 24, 1950, inclusive.

Sec. 4. *Definitions.* The terms "wages, salaries and other compensation" shall have the meaning defined in Section 702 (c) of the Defense Production Act of 1950.

Sec. 5. *Petitions for approval of increases.* Petitions for the approval of any increase in "wages, salaries and other compensation" affected by this regulation shall be filed with the Wage Stabilization Board.

Sec. 6. *Modifications and amendments.* This regulation may be modified, amended or superseded by orders or regulations hereafter issued by the Wage Stabilization Board.

All other orders and directives of the Economic Stabilization Administrator, including General Order No. 3 of January 24, 1951, are hereby superseded to the extent that they are inconsistent herewith.

ERIC JOHNSTON,  
Economic Stabilization Administrator.

Issued: January 26, 1951.



» JOSEPH D. Keenan was elected secretary-treasurer of the Building and Construction Trades Department of the American Federation of Labor last month to succeed the late Herbert Rivers.

Recently Mr. Keenan has been director of Labor's League for Political Education of the federation. He is a native of Chicago and has been secretary of the Chicago Federation of Labor.

During World War II he became Vice Chairman of the War Production Board for Labor Production. He was Associate Director when the board was established, and had previously been on the staff of the predecessor agencies. In 1945 he was appointed as a labor adviser to General Lucius Clay and helped with the reorganization of labor unions in Germany.

## Keenan Succeeds Rivers in A.F.L. Post

By virtue of his new post, Mr. Keenan became a member of the Department's Executive Council. Because of the rule against two members from the same union being on the council, Daniel W. Tracy, president of the electrical workers union, resigned. Mr. Keenan also is an electrical worker. Peter Fosco, secretary of the laborers' union, was elected to fill the vacancy.

Mr. Rivers had been secretary-treasurer of the department from the time it was reorganized in 1936 until his death on December 6 last year.

A native of Indiana, Mr. Rivers started his union career in Kansas City in 1912, subsequently becoming president of the Laborers' District Council there. In 1921 he was Commissioner of Labor for Missouri, at

which time he became friendly with President Truman. Recently when Mr. Rivers was in the hospital in Washington, the President came to visit him.

Mr. Rivers was an important figure in the building and construction trades activities, and was highly regarded by both union and employer representatives with whom he dealt. During World War II he was a member of the Wage Adjustment Board for the construction industry.



Joseph D. Keenan

## Recent Labor Cases Affecting Construction

**U. S. District Court Grants Union Injunction Under Taft-Hartley Act Forcing Employer to Accept Arbitration Award.** The Federal District Court, Middle District of North Carolina, recently held that a suit for injunctive relief as well as damages could be filed under Section 301 of the Taft-Hartley Act. The court found that the employer had refused to arbitrate a labor dispute in violation of its labor agreement and that money damages were not an adequate remedy for such a violation. The court, in issuing the injunction, said:

"The defendant relies on the common law and the law of North Carolina to the effect that a court of equity will not enforce an agreement to arbitrate and insists that a suit for damages is the only relief. The answer is found in *Shirley-Herman Co. v. International Hod Carriers*, 182 F. (2nd) 806. Section 301a of the Labor Management Relations Act creates a Federal remedy which is not controlled by state law. At least one Circuit Court has held that injunction does lie under this section. . . . The plaintiff (Union) has established by pleading and proof, at least prima facie, that the defendant (Employer) has failed to comply with the agreement and the defendant has not offered any proof but stands on its points of law. Plaintiff has also established that it has no adequate remedy at law and is entitled to equitable relief. Although plaintiff has not specifically asked relief under

the Declaratory Judgment Act, the allegations and proof make the provisions of the Act applicable."

The Taft-Hartley Act in Section 301a provides that suits for violation of labor agreements between unions and employers in an industry affecting commerce may be brought in the Federal Court. (*Textile Workers Union of America (CIO) v. Alo Manufacturing Co.* 19 Labor Cases 66,101.)

**NLRB Holds Union Solely Liable for Back Pay.** Charges were filed with the National Labor Relations Board against a local of the United Brotherhood of Carpenters and Joiners of America (AFL), by an employee claiming she was unlawfully discharged by the company at the request of the union. The union objected on the grounds that the employer who made the discharge was not also made a party defendant. The board, however, ruled that since no charges were filed against the company it could not be held to be in violation. The board held that under these circumstances the union which caused the employer to discriminate against the employee in violation of Section 8 (a)(3) and Section 8 (b)(2) of the Taft-Hartley Act could be held solely liable for any loss of pay incurred by the discharged employee. (*Ambassador Venetian Blind Workers' Union Local No. 2565, affiliated with the United Brotherhood of Carpenters and Joiners of America, AFL and Viola Dodd, an individual—Case No. 20-CB-73.*)



Herbert Rivers

## Many Momentous Decisions to Be Made by 82nd Congress

- Heavy Spending Slated for Next Two Years
- Deficit-Tax-Economy Fight Under Way

» THE 82nd Congress convened January 3 to start a series of momentous debates on subjects which affect our national life.

The actions which will be of most interest to the construction industry will be taken in conjunction with legislation of general interest.

The great debate will be on the policy of our national defense; to what other nations we should give assistance; and where our line of defense is to be drawn. The President in his state of the Union message devoted nearly all his time to outlining the policies being followed by the Administration.

Heavier spending can be foreseen for the next two fiscal years. The President in his annual economic report estimated that primary national security programs will cost \$140 billion during the two years ending June 30, 1952. In his budget he asked for \$71.6 billion in spending for the year starting July 1.

Increased defense spending will mean more defense construction work for the industry.

Heavier taxes are inevitable, with the President stating that he is determined to balance the budget. Estimated federal revenues indicate a deficit of \$16.5 billion to be offset by new taxes.

The debate already has started on the necessity for curtailing non-defense expenditures to the fullest extent possible in view of the heavier defense spending and heavier taxes.

### Public Works

Public works projects for other than the most urgent defense needs already have become a special target for many who are advocating greater federal economy.

Recommendations to draft 18-year-olds for military service has touched off another debate which will engage the attention of Congress.

Little final action was taken the first month of the new Congress. Much of the time was spent in receiving messages of the President, or-

ganizing the committees and starting to chart courses of action, introducing a great number of bills, and starting the debates.

The party lineup at the start was 49 Democrats and 47 Republicans in the Senate; 235 Democrats and 199 Republicans in the House. The smaller Democratic majority may have an influence on future legislation, particularly some of the Fair Deal measures which were requested in the President's budget message.

Conduct of the mobilization program undoubtedly will come under close Congressional scrutiny when it is time for the Congress to extend the Defense Production Act, which gives

the authority to the President for the program, when most of its titles expire on June 30.

The special session of the old 81st Congress, which had been scheduled to take little action when it convened November 27, took several important actions after the military reverses in Korea.

Working until the day before the new Congress convened, it passed a \$20 billion appropriation bill carrying about \$2 billion for construction; enacted the excess profits tax act; established the Federal Civil Defense Administration; and granted the President emergency powers for the modification of defense contracts.

In one of its early actions, the new House has passed and sent to the Senate a bill for extended renegotiation of war contracts with the power vested in a new, independent Renegotiation Board.

In debating the major issues affecting the nation the new Congress inevitably will take actions with important direct and indirect influences upon the construction industry.

## President Gets War Powers on Contracts

- Virtual Re-enactment of Old Act for National Defense

» EMERGENCY powers for awarding and modifying contracts were granted to the President in Public Law 921, approved January 12. This was substantially a re-enactment of Section 201 of the First War Powers Act, 1941.

The principal amendment to the old act was to strike out the words "the prosecution of the war effort" and insert the words "the national defense". As amended the section reads:

"The President may authorize any department or agency of the government exercising functions in connection with the national defense, in accordance with regulations prescribed by the President for the protection of the interests of the government, to enter into contracts and into amendments or modifications of contracts heretofore or hereafter made and to make advance, progress and other payments thereon, without regard to the provisions of law relating to the making, performance, amendment, or modification of contracts whenever he deems such action would facilitate the national defense: Provided, That nothing herein shall be construed to authorize the use of the cost-plus-a-per-

centage-of-cost system of contracting: Provided Further, That nothing herein shall be construed to authorize any contracts in violation of existing law relating to limitation of profits: Provided Further, That all acts under the authority of this section shall be made a matter of public record under regulations prescribed by the President and when deemed by him not to be incompatible with the public interest."

### Comptroller General

Congress this time added a proviso that: "All contracts entered into, amended, or modified pursuant to authority contained in this section shall include a clause to the effect that the Comptroller General of the United States or any of his duly authorized representatives shall have access to and the right to examine any pertinent books, documents, papers, and records of the contractor or any of his subcontractors engaged in the performance of and involving transactions related to such contracts or subcontracts."

Regulations under the act have not yet been announced.

» THE House on January 23 passed and sent to the Senate a strengthened bill for the renegotiation of defense contracts by a vote of 377 to 0.

The Senate Finance Committee was scheduled to open public hearings on February 1.

When the House Ways and Means Committee held extensive hearings on the subject last year, The Associated General Contractors of America testified in support of exempting construction contracts which had been awarded as the result of competitive bidding for the reason that such bidding was assurance that there would not be excessive profits.

The A.G.C. was expected to testify before the Senate committee this month on the bill.

The bill would make subject to renegotiation all of the moneys received or accrued by a contractor and related subcontractors on or after January 1, 1951, where the contracts are with the Departments of Defense, Army, Navy, Air Force, Commerce, the General Services Administration, the Atomic Energy Commission, and such other agencies exercising functions in connection with the national defense as the President may designate.

It is provided, however, that a contractor or subcontractor shall not be

## Strengthened Renegotiation Bill Sought

### • Now to Senate; A.G.C. to Appear at Hearings

renegotiated for any year unless he has received or accrued more than \$100,000 in the year.

There is a provision aimed at "five-percenters" that subcontractors whose income is derived from certain fees and commissions will be renegotiated for any year in which they have receipts and accruals of \$25,000 or more.

An Independent Renegotiation Board would be established by the bill to keep final responsibility for the renegotiation of government contracts separate from the procurement authorities who initially issued the contracts. Some of the renegotiation authority undoubtedly would be delegated to the procurement authorities, however.

#### Some Exemptions Made

While making no specific exemptions in the legislation which would apply to construction contracts, the Renegotiation Board would be given discretionary authority to exempt contracts or subcontracts which fall within the categories of the bill. The House committee stated:

"These include contracts to be performed outside the United States, certain contracts and subcontracts where the profits can be determined with reasonable certainty when the contract price is established, contracts and subcontracts where the provisions are considered adequate to prevent excessive profits, contracts and subcontracts the renegotiation of which would jeopardize secrecy required in the public interest, and contracts and subcontracts with respect to which it is not administratively feasible to determine and segregate renegotiable profits and profits attributable to activities not subject to renegotiation. The Board may exempt these contracts and subcontracts, both individually and by general classes or types."

The A.G.C. in previous testimony also recommended that the contractor be permitted to be renegotiated as a whole on all his construction projects subject to renegotiation; and that audits of records be made by the Bureau of Internal Revenue so that computations used for renegotiation and tax purposes would be the same.

## \$3 Billion Defense Housing Measure Up

### • Would Provide Loans for All Types of Home Building

» LEGISLATION to provide housing and community facilities in defense production centers, where needs are already felt, has been introduced at the President's request by Chairman Maybank (D., S.C.) and Spence (D., Ky.) of the Senate and House banking committees.

The disputed companion bills, S. 349 and H.R.1272, would provide \$3 billion in federal mortgage loans for all types of private home building with special assistance for rental housing. Federal aid in the form of loans and grants for the construction of schools, streets and sewers, and \$15 million in loans for manufacture of prefabricated housing are also provided.

The bills also include authority for the government to build homes and community facilities in areas where private builders do not meet the needs.

The defense housing bills, now being actively considered by both committees, would amend the National

Housing Act. A breakdown by titles of the bills is as follows:

Title I—Limits the provisions of the bill's application to those areas designated by the President as having an acute shortage of housing for defense purposes. The President would also determine the maximum amount of mortgages insured under the \$3 billion additional insurance program. The Housing and Home Finance Administrator would have the final authority to determine the maximum number of units to be insured and whether or not they are to be rental units.

Insured mortgages are to be based on value and not cost. Maximum insurance for single and multi-unit buildings is 90 per cent. Interest rates would range from 4 to 4½ per cent. Maximum mortgages are about \$8,100 per family unit.

Title II—Provides for the public construction of permanent, temporary

and mobile housing for defense workers and for assistance in the construction of community facilities and services. Where possible, the housing would be of a permanent one- to four-family type. Grants would be made for community facilities only where increased revenues do not meet the added expenditures.

Title III—Provides for the federal acquisition of land in isolated areas to prevent speculation. Construction work would be done by both public and private agencies. This title authorizes an appropriation of \$10 million to be used only for the purchase of land.

Title IV—Authorizes \$15 million in loans to manufacturers of prefabricated houses for the purpose of keeping the industry's present capacity available for future defense needs.

Title V—Contains numerous technical amendments to existing laws. One provision would make Title VIII of the National Housing Act available to the Atomic Energy Commission on the same basis that it now operates for the military services.

## Nearly \$3 Billion for Defense Construction

### • Supplemental Appropriation Includes Billion for AEC

» THE second supplemental appropriation, Public Law 911, approved January 6, provides over \$20.1 billion, most of which is for military preparedness.

The special session of the 81st Congress allotted \$17 billion for the armed services; for stockpiling critical materials, \$1.8 billion; for the Atomic Energy Commission, \$1 billion; and \$224 million for the construction of 50 cargo ships.

Excluding the appropriation for the Atomic Energy Commission, funds for construction total about \$1.6 billion. The following itemizes major construction projects for which appropriations have been made.

#### Defense Construction

The appropriation for the Army's construction program is \$319.7 million along with an additional \$575 million allotted for expediting production to be used at the discretion of the Defense Department for its over-all program.

Funds made available for the

Navy's public works program amount to \$303 million. For the construction program of the Coast Guard, \$7.9 million is appropriated.

The appropriation for land acquisition and construction by the Air Force is \$807 million.

The Atomic Energy Commission is appropriated \$1,065 million for its over-all program.

#### Building Construction

The National Bureau of Standards is appropriated \$1.4 million for construction of laboratories. The appropriation to the Public Health Service for hospital construction is \$10 million. Contract authority for the construction, activation, acquisition and expansion of public and private plants and facilities by the Maritime Commission is \$15 million.

#### Highway Construction

The appropriation for the Bureau of Public Roads includes \$4 million for the Inter-American Highway, and \$7 million for construction of access

roads, \$2 million of which is for the payment of expenses already incurred.

#### Heavy-Railroad Construction

For construction and acquisition of transmission lines and appurtenant facilities, and including administrative expenses, the Southeastern Power Administration is appropriated \$1.85 million. The Bonneville Power Administration is appropriated \$1.45 million.

For construction and the purchase of equipment, the National Advisory Committee for Aeronautics is appropriated \$1.8 million.

### Military Authorization

Authorized military and naval construction as finally approved January 6, Public Law 910, exceeds \$1.65 billion.

The Army is authorized to spend \$291,760,800 for public works projects in the United States and \$91,636,100 for projects outside the country. For its special weapons project, the Army is authorized to spend \$7.5 million to establish or develop military installations and facilities by construction, conversion, installation or equipment of temporary or permanent public works.

The authorization for the Navy's public works program is \$327,548,610 for projects in the United States and \$54,106,700 for projects outside the United States.

The Air Force public works authorization is \$451,467,000 for expenditure within the country and \$367,150,000 to be spent outside the country. For aircraft control and warning system facilities, \$66,987,000 is authorized.

A major portion of these authorized expenditures are funded by money appropriated in Public Law 911.

#### More Airport Aid

Federal aid in the acquisition of land for airports has been changed from 25 to 50 per cent federal participation.

Public Law 912, approved in January, amends the Federal Airport Act to increase federal aid. This amendment was advocated by the A.G.C.-National Association of State Aviation Officials joint committee during its meeting in March, 1949.

## Civil Defense Arm Powerful New Agency

### • Unprecedented Powers Granted to Aid Communities

» THE Federal Civil Defense Administration, the basic policy and the method of operation of the federal government in the civil defense program were established in Public Law 920, approved January 12. The title is Federal Civil Defense Act of 1950.

The legislation grants unprecedented powers to the government to assist communities stricken or threatened by attack. The Congress stated the intent, however, to vest the responsibility for civil defense primarily in the states and their subdivisions.

Estimates were reported by the Senate Armed Services Committee that during the next three years \$2¼ billion may be spent by communities, states and the federal government in construction of bomb shelters. (January Constructor, page 29)

An appropriation of \$255 million in federal funds for grants to local communities in bomb shelter construction has been requested in the federal budget. So far no criteria have been announced for allocation of the funds.

A request of \$190 million for the dispersal of government buildings in the Washington area also was made in the budget.

The Reconstruction Finance Corporation is authorized by the act to lend municipal governments up to \$250 million for the construction of dual-purpose facilities such as subways and underground garages. For facilities which are solely for civil defense, the federal government will lend funds to the states on a 50-50 matching basis.

Other estimated expenses in the \$3 billion program are: for stockpiling medical equipment and food supplies, \$300 million; for communications equipment, \$32 million; for federal administration costs including printing, publicity, training and research, \$100 million; for special organization type of equipment, \$200 million. The total three-year program is expected to cost the Federal Government \$1,670 million, and the states \$1,430 million.



» **GENERAL.** contractors will find little comfort in the excess profits tax signed into law on January 3, 1951, despite important provisions in the act reflecting to some degree the strong representations made on their behalf before congressional committees.

It is extremely complicated. The courts will be called upon to decide the correct meaning of many of its provisions. There are no simple formulas that apply to all corporations or groups of corporations. Many taxpayers, to determine the most favorable excess profits tax credit, will find it necessary to explore all of the available methods. A number of factors such as type of company, profitable years, borrowed capital, etc., will determine the method that results in the least excess profits tax.

The suddenness of the emergency that now confronts this country made calm deliberation of a revenue-raising bill impossible. The result: a hastily written excess profits tax bill enacted into law under the pressure of events. The congressional committee reports are not clear or helpful as on other revenue acts in the past. The Senate Finance Committee practically rewrote the House bill. However, the Senate committee report is not nearly as detailed as in the past. Neither report explains or takes into account amendments made on the floor of the Senate or by the conference committee. The report of the conference committee enumerates but gives little explanation of the changes made by that committee.

Here are the provisions of the new act that are of importance to general contractors operating as corporations:

**Rates.** Ordinary corporations are now subject to three taxes on their annual profits—a normal tax, a surtax, and an excess profits tax:

- (1) Normal tax remains at 25%. It has not been changed.
- (2) Surtax has been increased to 22% from the old rate of 20%. The 2% increase has not been made retroactive. Most corporations on a calendar year basis will pay the 2% increase only on income after January 1, 1951.
- (3) Excess profits tax of 30% has been imposed on all profits over and beyond the corporation's "Excess profits tax credit." This tax is made retroactive to

## Little Comfort for Contractors in Hasty Excess Profits Levy

### • Legal Counsel Advised in Making Contracts

By John C. Hayes

Hayes and Hayes, Washington, D. C.

July 1, 1950, and so will affect 1950 corporate income.

**Tax Limitation.** Ceiling on the combined rate of the corporate income and excess profits tax is 62% of the corporation's income. Under the World War II excess profits tax, this rate was approximately 72%.

**Minimum Excess Profits Credit.** The minimum excess profits credit is fixed at \$25,000. This replaces the specific exemption provided for in the last excess profits tax law. It is of no benefit to taxpayers having net taxable income in excess of \$25,000. The primary purpose of this credit is to relieve small corporations from the payment of excess profits tax and to prevent their being discriminated against by unincorporated competitors.

**Base Period.** The base period for taxpayers on a calendar year basis will be the four years 1946 through 1949. Fiscal year taxpayers are required to use the base period as set forth in the act.

**Excess Profits Credit.** The excess profits credit is the amount of income the corporation can earn before it is required to pay an excess profits tax. The act sets up two basic methods. One method is a credit based on average earnings during a base period. The other is a credit based on a rate of return on invested capital.

**Average Earnings Credit.** The average earnings credit consists of a basic credit of 85% of the average earnings of the best three of the four years in the base period. In addition, taxpayers are permitted to add 12% to the amount allowed for increase in capital during the last two years of the base period. The taxpayer is also permitted to add 12% of the amount allowed for a net increase in capital after the base period, or minus 12% of the amount of the net reduction in capital after the base period. The up-

ward or downward adjustment after the base period relates to equity capital, retained earnings, and 75% of borrowed capital.

**Invested Capital Credit.** The invested capital credit consists of a basic credit of 12% of the first \$5 million of invested capital, 10% of the next \$5 million, and 8% of the excess of invested capital over \$10 million. Invested capital includes 100% of equity capital and retained earnings, as well as 75% of the borrowed capital. The average taxpayer can compute its credit by applying the specified rates to invested capital computed either by the asset method or the historical capital method.

**Asset Method.** The asset method allows the taxpayer to compute its assets and retained earnings at the beginning of each taxable year and to subtract therefrom its liabilities. Next, add its loss during the 1946-1949 period or the 1940-1949 period, whichever deficit is greater.

**Historical Capital Method.** The historical capital method permits a taxpayer to take into account the net capital paid in since the corporation was organized, the accumulated earnings and profits at the beginning of the tax year, as well as 75% of the average borrowed capital during the tax year. This method is practically the same as that provided in the World War II Excess Profits Tax Law. Both of these methods allow adjustments to reflect net additions to and reductions in capital after the base period.

### Relief Provisions

The new excess profits tax law includes relief provisions, applicable to special classes of taxpayers, which permit the use of a substituted average base period net income for:

- (1) growing corporations, (2) base period abnormalities, (3) change in products or services during the base period, (4) increased capacity during the base period, (5) new corporations,

and (6) corporations that are members of a depressed industry.

**Growing Corporations.** To be eligible for relief, growing corporations must meet either of two sets of requirements. The first is limited to corporations whose total assets at the commencement of the base period did not exceed \$20 million. Taxpayers can qualify under this act of requirements if the total payroll for the last half of the base period was 130% or more of its total payroll in the first half, or if the gross receipts for the last half of the base period were 150% or more of its gross receipts in the first half. The second embraces all corporations, regardless of size. A taxpayer may qualify if twice the sales for the first six months of 1950 equals or exceeds 150% of the average net sales for the years 1946 and 1947 and 40% or more of 1950 net sales are attributable to a new product or products not generally available to the public before January 1, 1946; and net sales of such product in 1946 did not exceed 5% of net sales of such product in 1949. Taxpayers meeting either of these two sets of qualifications can then compute their excess profits tax credit on the periods set forth in the act.

**Base Period Abnormalities.** Where base period earnings were adversely affected by stoppage of production or operations or by temporary economic circumstances unusual to the taxpayer, provision is made for substitution of earnings based on the industry classification rate of return in lieu of actual earnings in the abnormal period. The industry rate of return will be determined by the Secretary of the Treasury on the basis of data compiled by the Treasury Department's statistical division from income tax returns. Application for relief must be filed by the taxpayer.

**Increased Capacity.** A corporation which commenced business before the base period and made substantial changes in its capacity during the last thirty-six months of the base period may elect a substitute average base period net income based on the rate of return for the industry classification. To qualify, taxpayers must have doubled their productive capacity or increased their capacity by 50% and also increased by 50% the adjusted cost of their physical assets or doubled the unadjusted cost of their physical assets.

**Industry Base Period Depression.** Taxpayers may substitute average base period net income based on 80% of the average rate of return for the industry classification during the years 1938-1948 in cases where the taxpayer's industry was depressed during the years 1946-1948. This applies only to taxpayers commencing business before the base period. Applications for relief must be filed as provided in the Act. To qualify, an industry had to have a rate of return on its total assets during 1946-1948 which was less than 63% of the industry's rate of return during 1938-1948.

The new law also contains relief provisions permitting the use of substituted average base period net income for new corporations as well as special rules governing reorganized corporations or corporations that acquired the businesses of other corporations, partnerships, etc.

#### Miscellaneous Provisions

**Long Term Contracts.** Taxpayers computing income from long-term contracts may elect in their returns to compute, in accordance with regulations prescribed by the Secretary, such income upon the percentage of completion method of accounting. Once the election is made it is irrevocable with respect to all subsequent taxable years. Prior year adjustments are provided for under this section of the act.

**Net Operating Loss Carry-back and Carry-over.** The new law permits a net loss carry-back of one year and a net loss carry-over of five years in the computation of the net income of an excess profits tax year. This differs from the World War II excess profits tax law which allowed a two-year carry-back and a two-year carry-over. A special provision permits a taxpayer using the excess profits credit based on income or historical invested capital method to carry-over to 1950 and 1951 losses sustained during the base period years that were not offset against the income of other years.

**Unused Excess Profits Credit.** This can be carried back one year or carried forward five years. This does not apply to any of the unused portion of the minimum excess profits credit of \$25,000 allowed by the act.

**Termination Date.** The new law provides that the excess profits tax shall not apply to tax years beginning after July 1, 1953.

#### Contractor's Dilemma

Even before the Excess Profits Tax Act of 1950 was passed by the Senate, administration forces were exploring every avenue in search of untapped sources of additional revenue. That there will be a further increase in taxes during 1951 is a foregone conclusion. Already there is talk of additional levies on corporations, as well as on individuals. Rumors of a hike in normal and surtax rates on corporations from the present 47% up to 55% or 60% and a boost in the present excess profits tax limitation to at least 65% are prevalent. It is almost a certainty that many new products will be made subject to the excise tax and that the excise tax on products now subject to the tax will be increased.

Exactly what the Administration has in its mind in the way of new taxes will not be disclosed until the Secretary of the Treasury appears before the House Ways and Means Committee and unfolds the Administration's plan for higher taxes. There are an increasing number of advocates for a general sales tax, a manufacturer's excise tax, or a gross receipts tax to insure the new revenue the Administration will request. This raises a serious problem for contractors. In the event a manufacturer's excise tax or a gross receipts tax is enacted into law, the contractor operating under the industry's customary contract method could very well be placed in a precarious position, regardless of whether the operation is conducted on the competitive bid, the negotiated fixed price, or the cost-plus basis. Unless these possibilities are safeguarded against in the contract, the result can very well be disastrous. Therefore, no contract should be entered into by any contractor until it has been submitted to the contractor's legal counsel so that it can be analyzed to insure that adequate provisions are incorporated in the contract to protect the contractor against increases in taxes affecting the operations, as well as against other contingencies that might arise.

**President Truman** took the unusual step January 31 of inviting both Democratic and Republican members of the House Ways and Means Committee to the White House for a conference on his tax program which he was scheduled to send to Congress early in February. It was a strong bid for bipartisan support.

» THE Administration's \$71.6 billion budget for the fiscal year beginning July 1, 1951, recommended a record \$3.8 billion in expenditures for civil and similar public works construction, which, combined with probable national defense construction, will bring the total to over \$4.5 billion.

The \$3.8 billion figure for civil public works compares with \$3.3 billion estimated expenditures for the fiscal year 1951, ending June 30 this year. The larger figure for next fiscal year results from a \$350 million expansion in the atomic energy program; anticipated financing of a large defense housing program, civil defense construction and dispersal of facilities; and the orderly continuation of a number of river basin development programs which were started in previous years and require several years to complete.

In general, major non-defense public works were curtailed in the budget, especially those of the Corps of Engineers and Bureau of Reclamation. Despite this fact, federal public works

## Budget Contains \$3.8 Billion for Federal Civil Public Works

- Military Construction to Swell '52 Outlay
- Non-Defense Items to Have Rough Sledding

programs, including many deemed by the Administration to be essential, were brought under immediate attack in Congressional efforts to pare the big \$71.6 billion budget as a means of reducing the necessity of further large tax increases to absorb a \$16.5 billion deficit.

### No Military Estimate

Possibilities of speedier action on various appropriations were seen in the revolt of the House Appropriations Committee last month against the single package appropriation bill championed by Chairman Cannon, which took so long in passage last year that some federal agencies were unable to

properly plan and schedule projects because of lack of funds.

No estimate was given by the President of the anticipated amount of military public works construction in fiscal year 1952, other than to note they "will be substantially larger than in recent years." However, the armed forces last month checked with the House and Senate Appropriations Committees before embarking on a billion-dollar program of base construction in the United States and overseas. The bulk of this will fall in fiscal year 1952, beginning next July 1.

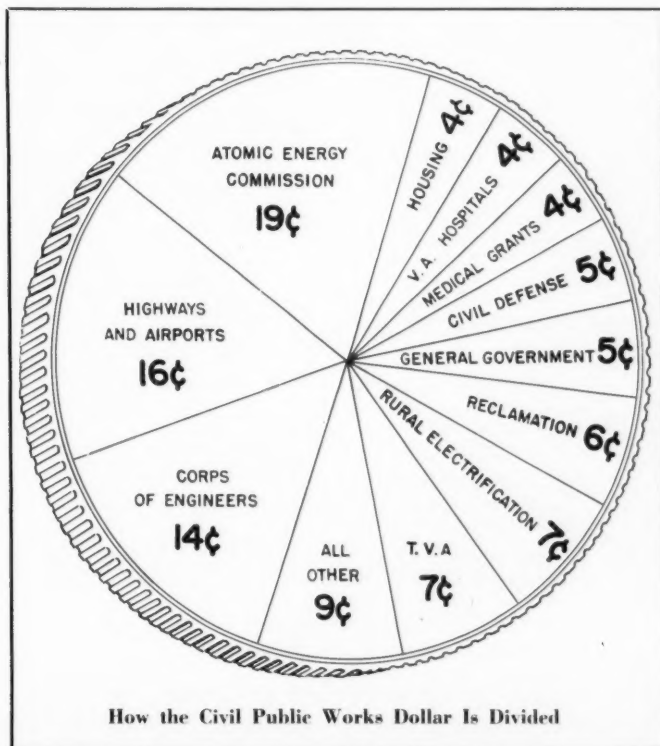
### President's Budget Message

In his message transmitting the budget, President Truman used public works as an example of reduction in non-defense spending:

"In order that our resources can be diverted to meet the demands of national security, strict economy in non-defense spending is required. Such a policy is incorporated in this budget. For example, the only major new public works projects included in the budget are those directly necessary to the defense effort. Construction on many public works projects now under way has been substantially curtailed."

With reference to military construction, he said: "We are now establishing training centers, bases, and camps for the enlarged forces. Furthermore, in order to prepare for the possibility of further mobilization, we shall be opening facilities with sufficient capacity to handle larger active forces than our immediate goals require. This budget will provide, therefore, for a considerable increase in military public works expenditures—primarily to expand and improve troop training centers and air bases."

The President emphasized the importance of production expansion, adding that "it is already clear" that the major provisions of the Defense Production Act which expire next June 30 "should be not only extended but broadened in several important respects." He promised specific recommendations pending a study by the Director of Defense Mobilization.



One recommendation contained in his message was additional authority to construct government-owned plants and facilities. After reviewing the incentives in the Defense Production Act and the tax laws, which authorize rapid tax amortization, direct and government-guaranteed loans, and long-term procurement contracts, the President asserted:

"Even with these liberal incentives, however, private enterprise cannot be expected to construct certain urgently needed, specialized productive facilities."

He also forecast more comprehensive controls over materials usage, presumably a blanket controlled materials plan, "when the full impact of defense procurement is felt this spring and in the fiscal year 1952."

#### Building Construction

Construction primarily building leads in the budget with recommended expenditures of \$1.7 billion, over \$600 million more than estimated for fiscal year 1951, due principally to the atomic energy program, defense housing, and civil defense.

The big \$720 million atomic energy program will consist almost entirely of increasing production facilities. Housing and community construction at existing facilities will decrease.

The budget recommends \$150 million for new defense housing, with estimated expenditures of \$100 million for fiscal year 1952 under proposed legislation.

Civil defense expenditures of more than \$100 million on a matching grant basis to states for protective facilities in critical target areas are recommended, together with \$65 million in loans by the Reconstruction Finance Corporation to public authorities for public works to serve as both shelters and community facilities.

Other sizable expenditures are the proposed \$164 million for dispersal of government buildings in the capital area, and \$155 million to complete the veterans' hospital program.

The federal-aid hospital construction program was cut down substantially from agency requests.

#### Heavy-Railroad Construction

The heavy construction items in the President's budget amount to more than a billion dollars, a reduction from the estimated fiscal 1951 total.

Corps of Engineers' recommended expenditures are reduced somewhat from the previous year's total, and the

Bureau of Reclamation's program is reduced by almost one-third.

Tennessee Valley Authority funds are recommended at \$265.7 million, an increase of \$22 million.

In the heavy category fall several of the new projects recommended by the President, with emphasis on expanded power production and navigational aids and facilities.

Foremost among these is the \$575 million St. Lawrence seaway and power project, for which the President recommended \$15 million to initiate construction. This project is pressed for additional electric power and economical access to the large iron ore deposits in Labrador and Quebec.

Only six other new river basin projects.

(Continued on page 37)

## THE FEDERAL PUBLIC WORKS BUDGET

(Does Not Include Military Construction)

### Construction Primarily Building

AGENCY OR FUNCTION	EXPENDITURES	
	Fiscal 1951 Estimate	Fiscal 1952 Estimate
Veterans Administration		
Hospital and domiciliary facilities	\$212,000,000	\$155,000,000
Administrative facilities	1,142,072	207,506
General Services Administration		
Veterans' educational facilities	30,718	6,200
Hospital Center, District of Columbia	2,018,791	
Geophysical Institute, Alaska	271,497	
Federal Courts Building, D. C.	8,500,000	1,013,877
Renovation, Executive Mansion	3,300,164	1,085,790
Renovation and improvement of federally owned buildings outside D. C.	14,373,333	7,100,000
General Accounting Office Building	16,690,000	1,057,111
Federal Office Building, Nashville, Tenn.	4,785,332	200,000
Sites and planning, buildings outside D. C.	8,379,044	4,000,000
Dispersal of Government facilities (proposed legislation)	6,000,000	164,000,000
All other general government	5,387,624	3,399,866
Department of State		
Foreign service buildings*	580,000	480,000
Federal Security Agency		
Public Health Service		
Grants for hospital construction	28,000,000	40,800,000
Grants for private nonprofit hospitals**	112,000,000	95,200,000
Construction of research facilities*	15,039,000	17,100,000
Aid to Medical Education (Proposed)**		2,000,000
Buildings and facilities, Cincinnati, Ohio	1,040,000	2,570,000
Heart and cancer research facilities*	3,666,526	3,097,130
Heart and Cancer Institutes, aids to research**	4,400,000	5,500,000
St. Elizabeth's Hospital	2,042,245	8,892
Emergency school construction*	14,750,000	75,750,000
Howard University, construction**	2,500,000	3,500,000
Department of Justice		
Federal Prison System	1,016,892	445,000
Federal Prison Industries, Inc.	150,000	200,000
Housing and Home Finance Agency		
Housing loans to educational institutions**	1,000,000	36,000,000
Veterans' re-use housing program	795,150	566,600
U. S. Housing Act program, loans, gross	336,560,200	250,900,000
Repayments	†163,999,000	†277,800,000
Alaska housing program, loans, gross	5,485,000	10,862,900
Repayments	†1,702,660	†7,552,560

(Continued on page 37)

NOTE: Expenditures include liquidation of contract authorizations.

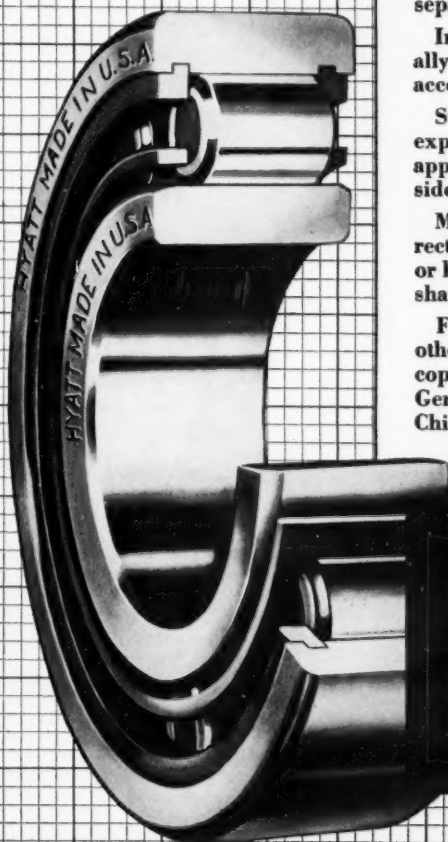
† Deduct.

\* Includes only that part of authorization used for construction.

\*\* For the first time not classified as "civil public works" in the strict sense of the definition. Either "international public works," "semipublic works," or "construction aids to private business and individuals."



*It's easier  
with HYATT  
HY-LOADS*



**I**N ADDITION to the "A-TS" bearing illustrated there are nine other major types of Hyatt Hy-Load Roller Bearings. Four have separable inner races, two have separable outer races and four are non-separable thus giving a designer a wide choice of bearings which permits flexibility in machine design and assembly procedures.

The "A-TS", one of the separable inner race type, is a high capacity cylindrical roller bearing made in two diameter series, wide and narrow widths, to standard AFBMA boundary dimensions.

Separable parts are freely interchangeable. Any inner race will fit any roller assembly of the same piece number. This permits non-selective fitting after pre-assembling the two bearing parts in separable machine elements.

Interference fit of the inner race makes it virtually an integral part of the shaft. It requires no accessory device to hold it in place.

Straight cylindrical inner race permits lateral expansion of the shaft through the bearing in applications where this is an important consideration.

May be applied with the rollers operating directly upon the shaft to utilize larger shaft diameter or bearing of smaller size, thereby gaining greater shaft rigidity.

For more information about the "A-TS" and other Hy-Load Roller Bearings, write for your copy of Catalog 547. Hyatt Bearings Division, General Motors Corporation, Harrison, N. J., Chicago, Detroit, Pittsburgh, and Oakland, Calif.

**HYATT ROLLER BEARINGS**

# HERE'S A STAR YOU'VE NEVER SEEN

*...its brilliant performance  
proved by field test  
and field use*



## THIS STAR

## PERFORMS FOR YOU IN THESE FEATURES:

- ★ *Simplest Pump Yet Designed*
- ★ *Removal of one cover plate provides accessibility to practically all wearing and moving parts.*
- ★ *Highly Portable . . . low weight yet sturdy construction.*
- ★ *Simplest, most positive leakproof seal ever designed.*

- ★ *The only pump which maintains "new pump" efficiency its entire life. The exclusive patented Rex Adjustable Air Peeler does the trick.*

Be sure to let your Rex Distributor explain the details and value of these features to you.

### CHAIN BELT COMPANY

1625 W. Bruce Street, Milwaukee, Wis.

CHAIN BELT COMPANY 51-305  
1625 W. Bruce Street, Milwaukee 4, Wis.  
Please send me a copy of your new Pump Bulletin.

Name.....

Company.....Dept.....

Street.....

City.....State.....



Construction Machinery

(Continued from page 34)

## Building—Continued

ects are recommended: Hells Canyon, The Dalles and Ice Harbor in the Columbia Basin, Old Hickory on the Cumberland River, a steam plant in the Tennessee Valley, and Gavins Point on the Missouri River.

The President stated:

"Although long-range improvement of our river basins is essential for the continued economic strength of the country, in the fiscal year 1952 we must emphasize those aspects of the programs which primarily support the national defense. . . . Many of the river basin projects contribute to defense as well as civilian industrial requirements through providing low-cost electric power in shortage areas. These projects are being pushed forward. Other projects, though desirable from a long-range standpoint, are being curtailed or deferred."

## Highways and Airports

President Truman recognized the highway situation as follows:

"Partly as a result of reduced construction and maintenance during World War II, our highway system is not yet fully prepared to handle the current peak levels of motor traffic. While long-range improvement is needed in all classes of roads, we must concentrate in the present emergency upon overcoming those road deficiencies which are most serious from the standpoint of national defense or essential civilian traffic.

"The impact of defense traffic will be especially heavy upon the National System of Interstate Highways. . . . Substantial relocation and construction are required in order to provide the width, strength, and other characteristics needed to handle anticipated traffic. In reviewing state and local requests for federal aid, the Bureau of Public Roads will give primary emphasis to projects on this system, and to the principal urban roads which connect with it.

"Construction will be started in the fiscal year 1951 on a small number of access roads immediately required to serve defense installations. As additional factories and military camps are activated for the defense program, the need for new or improved access roads will correspondingly increase. So far as possible, these and other emergency needs should be met by diversion of funds from roads of less urgency."

Funds recommended for next fiscal year for construction primarily high-

AGENCY OR FUNCTION	EXPENDITURES	
	Fiscal 1951 Estimate	Fiscal 1952 Estimate
Federal Civil Defense Administration*		8107,850,000
Reconstruction Finance Corporation, civil defense loans	85,000,000	65,000,000
Funds appropriated to the President		
Defense housing, community facilities and services (proposed legislation)		100,000,000
Department of Commerce, Bureau of Standards	1,394,679	2,476,296
Department of Agriculture		
Commodity Credit Corp., storage facilities*	53,274,000	25,524,000
Farmers' Home Administration		
Housing loans**	28,000,000	23,000,000
Farm ownership loans**	4,600,000	3,500,000
Research facilities*	699,000	93,515
Atomic Energy Commission, production, research, and town-site facilities*	377,000,000	720,400,000
Architect of the Capitol		
Changes and improvements, Capitol power plant	1,241,680	8,707,000
Senate Office Building	1,944	59,598
Capitol Building	1,934,425	
Loan to United Nations, buildings**	22,400,000	4,900,000
<b>Total, for construction primarily building, net</b>	<b>1,141,747,656</b>	<b>1,658,208,721</b>

## Construction Primarily Heavy-Railroad

Department of Agriculture		
Water conservation and utilization projects	8588,400	8507,148
Improving water facilities on farms in semi-arid areas**	3,800,000	4,700,000
Flood control*	800,000	750,000
Flood control, farmers' lands**	2,500,000	2,500,000
Tennessee Valley Authority, Public works*	243,709,865	265,671,000
Department of the Army, Corps of Engineers		
Flood control, general*	376,000,000	329,900,000
Flood control, general, emergency fund	10,000,000	10,000,000
Flood control, Mississippi River and tributaries*	49,700,000	43,200,000
Flood control, Sacramento River, Calif.	3,200,000	1,400,000
Flood control, all other	1,501,902	500,000
Niagara power development	350,000	1,700,000
Improvement of existing river and harbor works*	121,900,000	140,500,000
Alterations of bridges over navigable waters	2,500,000	1,500,000
St. Lawrence seaway and power project (proposed)		15,000,000
Panama Railroad Co., construction	1,315,455	13,161,300
Department of the Interior		
Southwestern Power Administration*	7,192,000	5,574,000
Southeastern Power Administration	500,000	2,850,000
Bonneville Power Administration	40,877,000	49,000,000
Bureau of Land Management	390,000	850,000
Bureau of Indian Affairs	25,000,000	11,650,000
Bureau of Reclamation		
Construction and rehabilitation	314,431,282	225,000,000
Columbia River project, Hells Canyon (proposed legislation)		5,500,000
Rehabilitation of Alaska Railroad*	25,719,793	6,500,000
Department of State		
International Boundary and Water Commission, United States and Mexico, Construction	5,907,095	13,150,000
<b>Total, for construction primarily heavy-railroad, net</b>	<b>1,237,882,792</b>	<b>1,151,063,448</b>

\* Includes only that part of authorization used for construction.

\*\* For the first time not classified as "civil public works" in the strict sense of the definition. Either "international public works," "semipublic works," or "construction aids to private business and individuals."

## Construction Primarily Highway-Airport

AGENCY OR FUNCTION	EXPENDITURES	
	Fiscal 1951 Estimate	Fiscal 1952 Estimate
Department of Agriculture, Forest Service		
Forest development roads and trails*	\$6,840,000	\$8,600,000
Roads and trails for states, national forests fund	3,705,317	4,056,607
Protection and management construction*	325,000	320,000
Forest roads and trails	221,975	11,820
Department of Commerce, Bureau of Public Roads		
Federal-aid postwar highways*	406,694,732	408,770,000
Federal-aid highway system	3,000,000	1,558,405
Federal-aid secondary or feeder roads	1,600,000	1,020,018
Elimination of grade crossings	8,237,814	5,211,925
Forest highways	23,186,323	25,000,000
Tongass Forest highways, Alaska	800,000	4,200,000
Testing and research laboratory	460,013	
All other grants	6,233,016	3,730,640
Access roads and other	4,379,021	7,314,640
Inter-American Highway**	3,100,000	4,700,000
Flight strips (national defense)	50,000	50,000
Civil Aeronautics Administration		
Establishment of air-navigation facilities	26,000,000	30,000,000
Construction, Washington National Airport	1,248,999	75,000
Federal-aid airport program*	33,507,000	45,555,000
Construction of public airports, Alaska	6,000,000	4,500,000
Development of civil landing areas	90,000	14,736
Department of the Interior		
Office of Territories, Alaska roads*	27,741,922	24,800,000
National Park Service, construction*	18,662,086	15,900,000
<b>Total, for construction primarily highway and airport</b>	<b>582,083,218</b>	<b>595,388,791</b>

## Miscellaneous Public Works

Reconstruction Finance Corp.		
Provision of community facilities, loans	\$20,000,000	\$30,000,000
Repayments	14,500,000	15,100,000
General Services Administration, community facilities, defense public works	727,928	707,805
Department of the Interior		
Virgin Island public works	1,848,000	1,957,093
Alaska public works	5,003,629	9,885,358
Bureau of Mines, Construction*	4,500,000	1,650,000
Fish and Wildlife Service, construction*	1,117,474	1,156,000
Geological Survey, Denver Federal center*		600,000
Department of State		
Restoration of salmon runs, Fraser River system	173,133	31,302
International information and educational activities, construction*	6,400,000	72,600,000
Housing and Home Finance Agency, advance planning of non-federal public works*	22,663,112	6,900,000
Department of the Army		
Panama Canal, improvement and betterments*	4,037,608	506,000
Panama Canal, memorial to Gen. Goethals		156,509
Quartermaster Corps, cemeteries*	1,686,114	400,000
American Battle Monuments Commission	6,000,000	6,200,000
Treasury Department, Coast Guard construction*	9,736,964	6,005,900
Department of Agriculture, Rural Electrification Administration, loans, gross**	302,324,288	260,000,000
<b>Total, miscellaneous public works, net</b>	<b>381,718,250</b>	<b>393,655,969</b>
<b>Total, all civil public works, net</b>	<b>3,343,431,916</b>	<b>3,798,316,929</b>

† Deduct.

\* Includes only that part of authorization used for construction.

\*\* For the first time not classified as "civil public works" in the strict sense of the definition. Either "international public works," "semipublic works," or "construction aids to private business and individuals."

way and airport total slightly over \$595 million, including an estimated \$408.7 million from federal-aid postwar highway authorizations.

Grants under the federal-aid airport program will be restricted for new projects primarily to terminal-type airports of highest priority "from the standpoint of traffic density or anticipated national defense needs."

## Miscellaneous Public Works

The Rural Electrification Administration's programs of electrification and rural telephones are reduced from an estimated \$302 million in this fiscal year to \$260 million. About 86 per cent of the country's farms are reported electrified. Both programs cause heavy drains on scarce materials needed for defense, the budget noted.

Three new classifications were included for the first time in the budget:

1. "Semipublic works." The REA programs; grants for hospitals not publicly owned, mostly private non-profit, for which \$95 million is estimated; grants to medical schools for construction of additional facilities, \$2 million; loans to educational institutions for dormitories and family housing, \$36 million; and Howard University, Washington, D. C., \$3.5 million.

2. "International public works." \$4.9 million estimated expenditure on the United Nations' buildings in New York, a part of the 1948 loan of \$65 million; and \$4.7 million to continue construction on the Inter-American Highway.

3. "Construction aids to private business and individuals." Farm housing, farm ownership, and water facilities loans under the Farmers' Home Administration, estimated at about \$31.2 million; agricultural flood control on farmers' lands, \$2.5 million; housing finance programs, and loans to business.

The three categories above are included in the budget tables on these pages, with the exception of business loans and housing finance.

A sizable part of funds made available to business firms by the RFC is used for construction of new plants, and special loans are authorized under the Defense Production Act. However, these activities, and the government's insurance and mortgage guarantee programs for housing can hardly be considered as public works.



» THE primary national security programs being followed by the federal government contemplate expenditures of \$140 billion for the fiscal years ending June 30, 1952.

The security programs were outlined to Congress and the nation by the President in his State of the Union message delivered January 8. The impact of the programs on our economy, and the remedies he recommended were outlined in his economic report issued January 12.

In the economic report he stated:

"For the fiscal years 1951 and 1952 combined, new obligational authority enacted or anticipated for our primary national security programs—for our military forces, for economic and military aid to other free nations, for atomic energy and stockpiling, and for related purposes—will probably total more than \$140 billion.

"Actual expenditures on these programs in the fiscal year 1950, the last full year before the Korea outbreak, totaled about \$18 billion. At the present time, they are running at an annual rate of somewhat more than \$20 billion. By the end of this calendar year, they should attain an annual rate between \$45 and \$55 billion, or from \$25 to \$35 billion above the present rate.

"The actions we are taking should enable us, within twelve months, to expand this rate of expenditures very rapidly if necessity should require.

"Current expenditures for these purposes represent about 7 per cent of our total national output. By the end of this year, this proportion may rise to as much as 18 per cent. This compares with the roughly 45 per cent of our total output that we were devoting to defense during the peak year of World War II."

#### Fight for Peace

In his State of the Union message, the President emphasized that all free nations face the threat of Communist aggression and that as the most powerful single member of the community we have a special responsibility. The "practical, realistic" program for meeting this is:

"First, we shall have to extend economic assistance, where it can be effective. In Europe, the Marshall Plan has had electrifying results. The countries which have received Marshall plan aid have been able, through hard work, to expand their productive strength—in many cases, to levels higher than ever before in their his-

## National Security Programs to Cost \$140 Billion in 2 Years

- President Outlines Impact on Economy
- 10-Point Legislative Program Sought

tory. We shall need to continue some economic aid to European countries. This aid should now be specifically related to building their defenses. In other parts of the world, our economic assistance will need to be more broadly directed toward economic development.

"Second, we shall need to continue our military assistance to countries which want to defend themselves. Strategically, economically and morally, the defense of Europe is part of our own defense. Our program of military assistance extends to nations in the Near East and the Far East which are trying to defend their freedom.

"As the third part of our program, we will continue to work for peaceful settlements of international disputes. We will support the United Nations and remain loyal to the great principles of international cooperation laid down in its charter."

#### Defense Production Program

The nation's defense production program was summarized by the President in one sentence: "We are preparing for full wartime mobilization, if that should be necessary."

The aim, he amplified, is to produce all the weapons and equipment an armed force of 3.5 million men and women will need, besides those required for our own reserve supplies and for our allies. The program has two parts, as follows, he stated:

"The first part is to get our defense production going as fast as possible. We have to convert plants and channel materials to defense production.

"The second part is to increase our capacity to produce and to keep our economy strong for the long pull. We do not know how long communist aggression will threaten the world. Only by increasing our output can we carry the burden of preparedness for an indefinite period in the future."

#### Congressional Action

The main subjects on which legislation will be needed were outlined by the President as follows:

First, appropriations for our military build-up.

Second, extension and revision of the Selective Service Act.

Third, military and economic aid to help build up the strength of the free world.

Fourth, revision and extension of the authority to expand production and to stabilize prices, wages, and rents.

Fifth, improvement of our agricultural laws, to help obtain the kinds of farm products we need for the defense effort.

Sixth, improvement of our labor laws to help provide stable labor-management relations and to make sure that we have steady production in the emergency.

Seventh, housing and training of defense workers, and the full use of all manpower resources.

Eighth, means for increasing the supply of doctors, nurses, and other trained medical personnel critically needed for the defense effort.

Ninth, aid to the states to meet the most urgent needs of our elementary and secondary schools. Some of our plans will have to be deferred for the time being. But we should do all we can to make sure our children are being trained as good and useful citizens in these critical times ahead.

Tenth, a major increase in taxes to meet the cost of the defense effort.

#### Taxation

A special message to Congress was expected early in February from the President outlining his proposals for additional taxation. On the basis of anticipated federal receipts and expenditures the next fiscal year a tax increase of approximately \$16.5 billion would become necessary.

The last two major tax bills passed by Congress are expected to increase revenues \$8 billion a year. In his Economic Message, the President stated:

"Legislation should be enacted, at this session of Congress, to increase taxes very much more than they were increased by the last two major tax bills which the Congress enacted."

# SENSATION



*An addition to the*

**CONTRACTORS'  
COMBINATION**

# NAL

# *New*

## 600-cfm PORTABLE COMPRESSOR

using a new advanced-design Rotary Compressor

*Years ahead of any other  
large capacity portable*



Weights only 9500 lbs  
ready to run

- Amazing new GYRO-FLOW compressor... two-stage, oil-cooled rotary type without valves... without pistons, rings or rods... without clutch.
- Never gets hot... discharge temperatures less than 200°F under normal operating conditions.
- Matched to powerful, nationally-known General Motors diesel engine... takes full advantage of modern speeds.
- I-R AIR-GLIDE Capacity Control... the only automatic, step-less regulator that controls the air output smoothly over the full range from 0 to 100% capacity... all within a 10-pound pressure range.
- Weighs only 9500 pounds ready to run... as much as 20% less than other big-capacity portables.
- Gets maximum work out of two of the most powerful wagon drills... delivers full 600 cfm at 100 psi pressure.

*by* **Ingersoll-Rand...**  
11 BROADWAY, NEW YORK 4, N. Y.

The portable compressor builder that many times before has set new standards

- First Two-Stage Air-Cooled Portable Compressor
- First 500-cfm Portable that was really portable
- First Automatic Speed-Control of Capacity
- First and only MOBIL-AIR.

594-2

*Write or call your nearest Ingersoll-Rand representative for the full story.*

## A.G.C. Issues Recommendations on Planning for Civil Defense

- Study Requested by Federal Government
- General Contractors Would Have Big Task

[This article is composed of excerpts from the Civil Defense Report of The Associated General Contractors of America prepared at the request of the Federal Civil Defense Administration.—Ed.]

» **THE NECESSITY** for a civil defense program lies in the fact that the outcome of two world wars has been decided by the weight of American industrial production in support of a determined fighting force.

In another major war it is reasonable to assume that an enemy without warning would seek to cripple or destroy the productive capacity of the United States immediately, and to direct attacks against civilian communities to disrupt support of the war effort.

In this air and atomic age, the United States cannot be considered free from the dangers of sudden, devastating attacks. It is expected that such attacks would be partially successful.

How successful these attacks would be in permanently crippling American productive capacity would depend to a great extent on the organization and efficiency of the nation's civil defense program.

After an attack it will be essential to clear shattered areas with the utmost speed to retrieve the dead and wounded, to demolish damaged structures which endanger life, and to restore essential facilities to use.

No segment of our civilian life is so well equipped by its daily activities and training in civilian disasters to assist in this work as organizations in the construction industry.

These are the basic reasons for there being a civil defense program, and for the federal, state and local governments seeking the cooperation of the construction industry in planning for the most effective operation of that program.

### Declaration of National Policy

The basic policy of the civil defense program was set forth clearly by Congress in Section 2 of Public Law 920,

81st Congress, Second Session, which states:

"It is the policy and intent of Congress to provide a plan of civil defense for the protection of life and property in the United States from attack. It is further declared to be the policy and intent of Congress that this responsibility for civil defense shall be vested primarily in the several states and their political subdivisions. The federal government shall provide necessary coordination and guidance; shall be responsible for the operations of the Federal Civil Defense Administration as set forth in this act; and shall provide necessary assistance as hereinafter authorized."

The Federal Civil Defense Administration, and its predecessor organization under the Director of Civil Defense of the National Security Resources Board, is carrying this policy one step farther as a matter of administration. It has sought the cooperation of responsible business and industrial organizations in planning the actions which are to be taken.

This report is based upon work which was undertaken as the result of specific assignments to The Associated General Contractors of America to assist in planning how most effective use could be made of general contractor organizations in the civil defense program.

### A.G.C. Policy

Upon receipt of its assignments from the federal government, the officers, Executive Committee and national staff of the A.G.C. gave careful study to the problem. The following determinations were made:

1. The construction industry could perform effectively functions in the civil defense program, such as clearing shattered areas and repairing damage, which could not be performed as efficiently by any other groups.

2. Organizations in the construction industry could operate most effectively when they were kept intact and each group performed as nearly as possible the tasks it performs in civilian activity.

3. Groups in the construction industry would accept and discharge the responsibility of helping to plan for their most effective use in the event of disasters.

4. The national association should cooperate with the FCDA to make studies and recommendations on a nationwide industry basis for most effective use of general contracting organizations in the civil defense program, and give such other assistance as was needed.

5. When possible, the national association should transmit approved recommendations to its members and chapters, so that members and chapters could cooperate with state and local civil defense authorities in accord with recommendations which the FCDA would make.

6. It was to be assumed that when approved policies and procedures had been determined members and chapters would give their wholehearted support to state and local civil defense authorities.

These determinations have guided actions of the national association.

### Engineering Service

The Engineering Service, in which the construction industry is most directly concerned, is one of several services in state and local civil defense organizations. It will be one of the most important.

Its functions are outlined starting on page 76 of the report sent to chapters previously entitled "United States Civil Defense." The FCDA expects to send states and communities additional suggestions on organization of the Engineering Service soon.

The FCDA is expected to recommend that representatives be appointed to the Engineering Service from such groups as the contract construction industry, public officials, utilities, industries in the area, communications, railroads and others. These representatives would choose one man as head of the services, with the others to be an advisory committee and part of his staff.

Because the general contractor is the normal coordinating and organizing force in construction operations, the recommendation has been made that A.G.C. chapters and other local groups of contractors elect an outstanding general contractor for selection as the construction industry representative on state and local organizations.

The recommendation also has been



made that the managers of A.G.C. chapters, and managers of other contractor associations, offer their services as assistants to the director of the Engineering Service because of their intimate knowledge of the industry in the community.

#### History of Conferences to Date

Early conferences on the project were held with both officials of the General Services Administration and those officials and representatives of NSRB concerned with civil defense and civil mobilization. At a meeting held May 24-25, 1950, entitled "Construction and Engineering Conference on a National Plan for Civil Defense Organization," Mr. Paul Larsen, then Director of Civil Defense, NSRB, stated emphatically that civil defense organization would not be handled under martial law; that it is to be planned and operated by a civilian organization rather than the military. While this would not exclude full and complete use of police personnel and equipment, it is understood that these are to be definitely civilian controls. At the May 24-25 conference, attended by Mr. Walter L. Couse, president of the A.G.C., and Mr. H. E. Foreman, managing director, representing the private construction industry, advice was given that similar conferences had already been held with police representatives and with fire-fighting representatives, and that meetings with medical representatives would be held in the near future.

Subsequent to the May 24-25 meeting, three progress meetings were held, participated in by the managing director and members of the national staff of the A.G.C. and appropriate officials of NSRB, after which the association submitted a preliminary report dated June 30, 1950.

On October 10 a meeting was held between the Civil Defense Committee of the A.G.C., consisting of the president, the vice-president and the nominee for incoming vice-president, the managing director and members of the A.G.C. staff, and the acting director of Civil Defense, NSRB, and those members of his staff most directly concerned with civil defense. The association's preliminary report of June 30 was reviewed and the problem further discussed. The outcome of this meeting was the request of NSRB for the association to develop and submit by December 1, a second report susceptible to enlargement and conversion by NSRB into an appli-

cable manual or series of manuals.

#### Current Recommendations

In every potential target area, a general construction contractor of recognized ability should be selected as coordinator or general supervisor for that area. His selection should be made by the civil defense authorities upon recommendation of other construction contractors in the community.

One and preferably two deputy coordinators should be chosen in the same manner. They should be furnished with a complete roster of all construction contractors in the area, A.G.C. members and non-members alike, and the type of work done.

When a local association of general contractors has a headquarters in the area, the manager or secretary should be appointed as a liaison officer. The coordinator should fully acquaint himself with the ability, equipment and personnel of all contractors in nearby communities so that in case of a major disaster, requiring larger mobilization, he will know what support is available.

When there is no local association, a man should be chosen by the contractors as the coordinator's liaison officer.

Every effort should be made by the coordinator to assign contractor's forces as a unit. Each contractor's organization should operate as a team.

Enumeration of section headings in the remainder of the extensive report will show to what detail it has been developed: The contractor's activity in the disaster area; disposal of debris; consultative status with the U. S. Corps of Engineers; cooperation with other services which includes fire and police departments, medical authorities, public works officials; access to damaged areas by construction workers; authority for shutting off water, gas mains and power lines; expediting transportation of equipment; and availability of construction equipment.

Much weight is given the subject of organizing and training contractor construction units. This includes the distribution of personnel, listing of necessary equipment, both for initial clearance and rescue and for clean-up. It lays down procedure to be followed under various circumstances.

Other important section headings include communications, control centers, location of these centers, their design and construction, personnel, decentralization of control centers.

The matter of transportation is vital in civil defense and is considered extensively in the report: transportation, need for alternate transportation, identifying emergency transportation units, and passes for special transportation.

The report concludes with studies covering damage surveys, rescue service and compensation and immunity.

## A.G.C. Sponsors Engineer Aviation Brigades

### • West Coast Chapters Active in Forming Three Large Units

» THREE Pacific coast chapters of The Associated General Contractors of America now have engineer aviation construction brigades consisting of headquarters and headquarters company fully activated and on the troop list which means they are qualified to be called to active field duty. These brigades are included in the 96 engineering units that the A.G.C. has been asked to sponsor in the Army Affiliation Program. The quota had been 76, but in December the Army requested an additional 20 units.

The 417th Engineer Aviation Brigade is sponsored by the Portland, Oregon, Chapter, and is commanded by Lt. Col. Walter G. Kratt.

The 498th Brigade is sponsored by the Mountain-Pacific Chapter of Se-

attle, Washington, Lt. Col. G. Zucco, commanding.

The 499th Brigade is sponsored by the Northern California Chapter, San Francisco, and is commanded by Lt. Col. Charles MacClosky.

The aviation brigade, headquarters and headquarters company, will be the nucleus of an engineering aviation brigade of several thousand men.

The function of the brigade is to plan and direct the engineer effort in establishing bases and lines of communication; to command assigned and attached units such as engineer groups, and supervise their administration; to review brigade supply requirements and to supervise procurement and allocation of equipment and materials; and to provide medical

service to attached units not having organic medical detachments.

The unit will normally be assigned to a communications zone or to a separate task force. It may be assigned to army or higher headquarters, especially during the planning and initial stages of an operation requiring considerable engineering effort.

Unit capabilities include command and supervision of a large force of men and preparation of over-all plans and designs for facilities required at military bases. The unit may also serve as a control headquarters for a separate engineer task force for a

major military project. Signal communications will be the responsibility of and be provided by the command to which assigned. Signal units may be assigned as required.

The engineer brigade headquarters in Seattle and Portland are to supplant the Engineer Port Construction and Repair units sponsored by the Mountain-Pacific Chapters for the past two years. They will be much larger forces around which in a national emergency will be thrown thousands of construction men to carry through projects vital to the success of our armed forces.



H. C. "Pat" Maginn, chairman of A.G.C.'s Northern California Chapter's military affairs committee, (in civilian clothes) extends a handshake of congratulations to Col. W. F. LaFrenz, representing the Commanding General of the Sixth Army. Other officers taking part in the activation ceremony of the 499th Brigade are (from left to right) Capt. John C. Dowdakin, C.O., 717th Engineer Heavy Equipment Company; Major John G. McGlone, engineer unit instructor; Capt. R. J. Spiegel (behind Col. LaFrenz) adjutant, 820th Engineer Aviation Battalion; Lt. Col. Dana R. Tyson, C.O., 362nd Engineer Construction Group; Lt. Col. Charles MacClosky, commander of new brigade; Lt. Col. Donald Morgan, C.O., 820th Engineer Aviation Battalion; and Chaplain Clement A. Davenport.

### **Col. Forney Dies in Action**

Colonel Frank H. Forney, former Corps of Engineers District Engineer at Buffalo, New York, was killed in action November 29 in Korea, where he was in command of an engineer combat group.

An officer in the Corps for 21 years, during which he held posts in both the United States and overseas during World War II, Colonel Forney took part in the amphibious landings at Inchon where his unit participated in the building of several vital bridges.

His wife and three children reside in Eugene, Oregon.

### **Pick Lauds A. G. C. Action**

The three-year program of The Associated General Contractors of America in sponsoring 75 reserve construction units in the Army's troop program by the end of 1950, was praised in a letter last month from Major General Lewis A. Pick, Chief of Engineers, addressed to Managing Director H. E. Foreman.

General Pick said the association has been "a most welcome associate of the Corps of Engineers" in the Affiliation Program since September 19, 1947.

He said the 20 additional units added to the A.G.C.'s quota are of the types needed most urgently, and expressed gratification that "your efforts can be of even greater satisfaction to the association and increased value to the Corps of Engineers and the Army."



Part of membership of 417th Brigade at a regular meeting in Portland.

*Ackroid Photograph*

# Big Producers !



▲ NEW "CAT" DW20 TRACTOR AND W20 WAGON

NEW "CAT" DW21 TRACTOR AND NO. 21 SCRAPER ▼



THESE power twins are the largest earthmovers ever engineered by "Caterpillar." They combine high speeds with high capacities to meet today's demands for increased production for both civilian and military needs. They give construction men the choice of two or four wheels in husky hustlers built to stand up under the toughest going.

For big production on long hauls, you can't beat the 4-wheel "Cat" DW20 with its top speed of 26.6 m.p.h. The DW20 offers two matched trailer units. The W20 Wagon—heaped capacity, 25 cu. yds. And the No. 20 Scraper—heaped capacity, 19½ cu. yds. The DW20 is also available with the No. 20S Bulldozer.

For big production on jobs best suited to 2-wheel rigs, you've got the edge with the "Cat" DW21. Trailing the No. 21 Scraper, which has a heaped capacity of 19½ cu. yds., its top speed is 20 m.p.h.

Both these speedy giants are powered by the new 6-cylinder "Cat" Diesel Engine, producing 225 HP. available at the flywheel. For complete data, see your "Caterpillar" dealer. Under today's conditions, it's a good move to talk over your requirements now with him. He's as close as your phone for service or information—call him today!

**CATERPILLAR, PEORIA, ILLINOIS**

## CATERPILLAR

REG. U. S. PAT. OFF.

DIESEL ENGINES • TRACTORS • MOTOR GRADERS  
EARTHMOVING EQUIPMENT

## Future of Metal Exterior Walls Held Promising by Contractor

- Experience Cited in Prefabricated Spandrels
- Perry Urges Research by Producers, Designers

» SAVINGS in cost and time could result from the use of custom manufactured metal skin or spandrel walls in commercial, industrial and institutional buildings, J. P. H. Perry, consultant, Turner Construction Company, A.G.C., told the Building Research Advisory Board's Conference on "Fire Resistance of Exterior Non-Load-Bearing Walls," held November 21 in Washington. (For earlier story of this meeting, see January *CONSTRUCTOR*, page 50.)

Mr. Perry centered his talk on the design of non-load-bearing spandrel walls applied by the Turner Construction Company in the construction of seven outstanding multi-story office buildings, to cost around \$120 million when completed. A description of typical sections of these buildings follows:

### 7 Buildings Described

"1. The John Hancock Building (Boston) is faced with sandstone, generally 4" thick, backed with a backing of common brick and with 2" of Fiberglas insulation lined with a Hauserman type metal lining on the inside, resulting in a total wall thickness between windows of about 18". The sash are projected aluminum sash glazed with Thermopane, and the spandrels beneath and above the sash are made of sheet extruded aluminum backed with 8" of block with Fiberglas insulation with Hauserman type metal linings and air conditioning enclosures, resulting in a spandrel thickness of about 12", exclusive of air conditioning enclosures.

"2. New England Tel. & Tel. Building (Boston). This building is faced with limestone, generally 4" thick. The installation of this limestone was unusual because of a special earthquake design incorporated in the structural steel frame. The stone was backed with 8" of common brick with 2" of foam glass insulation and furred with block and plaster for one-half of the building, and Hauserman type metal lining for the other half, which resulted in a wall thickness between windows of approximately 18". The

spandrels were of cast bronze backed with 8" of common brick covered with 2" of foam glass insulation. The sash were bronze sliding casement, 50% of which were glazed with Thermopane. The interior finish was a Hauserman type metal lining or air conditioning enclosure resulting in a spandrel thickness, not including air conditioning enclosures, of about 12".

"3. Mutual Life Insurance Company (New York). The exterior of this building was faced with limestone, generally 4" thick, with an 8" common brick backup furred with 2" of block, plastered, resulting in an over-all thickness of about 16" between windows. The spandrels were of cast aluminum backed with 4" of block covered with a 1" fiberboard insulation and faced with a Hauserman type metal air conditioning enclosure, resulting in an over-all thickness of about 7", not including the air conditioning enclosures. All sash were double hung Pomeroy type steel sash.

"4. United Nations (Secretariat Building). This building on its east and west elevations is faced with 1/4" Solex heat-absorbing glass with aluminum framing. This glass from the floor for a height of 2' 6" is backed with a 4" block painted black on the exterior side and covered with a sprayed-on insulation on the interior side. This block is covered on the interior by a continuous metal convective enclosure. The over-all thickness of this unusual spandrel wall, including the glass exterior facing, but not the air conditioning enclosure, is approximately 7 1/2". The north and south walls of this building (the narrow elevations) are faced with Vermont Pearls and rubbed marble, generally 4" thick, backed with 8" of common brick, furred with 4" of block and plastered, making a total thickness of approximately 18".

"5. 600 Fifth Avenue (New York). This building is faced with limestone, generally 4" thick, backed with 8" of common brick and furred with metal lath and plaster, making a total thickness between windows of approximately 15". The spandrels of this

building are also of limestone, generally 4" thick, backed up with 8" of common brick. Above the windows, the wall is furred with lath and plaster, and below the windows covered with continuous Hauserman type air conditioning enclosure, resulting in an over-all thickness of approximately 13", not including the air conditioning enclosure. The sash are Pomeroy type double hung steel.

"6. 525 William Penn Place Building (Pittsburgh). This building is faced with 4" of limestone with an 8" common brick backup lined on the inside with a Hauserman type metal lining, resulting in an over-all thickness between windows of approximately 16 1/2". The spandrels are of stainless steel backed with 8" of common brick with a 1" fiberboard insulation, faced on the inside with Hauserman type metal continuous air conditioning enclosure or metal linings, resulting in an over-all thickness, not including air conditioning enclosures, of 12". The sash are of stainless steel two lights high, the upper light being fixed and the lower light single hung. (The sash and the stainless steel facia plates were assembled in one prefabricated unit which was delivered to the job ready for installation.)

"7. Chrysler Building East (New York). This building will be faced with 4" of face brick and backed with 8" of common brick furred with metal lath and plaster, resulting in an over-all thickness between windows of approximately 15". The spandrels are 4" of face brick with an 8" common brick backup, lined on the interior side with a Hauserman type metal lining or air conditioning enclosure, resulting in an over-all thickness of approximately 12 1/2", not including air conditioning enclosures. The sash in this building are to be double hung aluminum."

### Panel Costs Analyzed

To eliminate consideration of all seven buildings for the purpose of cost analysis, Mr. Perry chose the Massachusetts Mutual Life Insurance Company's building as representative of typical pre-war exterior wall construction and estimated costs of a typical wall panel for a mid-height or 15th story. Included in the cost were the following items: limestone, brick backup, structural steel, scaffold, damp-proofing, spandrel waterproofing, caulking, spandrel fireproofing, double hung aluminum sash three windows wide, glass and glazing, metal lath fur-



ring, three coats of plaster, painting, asphalt tile base, air conditioning enclosures, and venetian blinds.

"(a) On the 600 Fifth Avenue building, the typical wall panel is 11' 10" by 26' 7 1/2". As now being built, except for an assumption that the sash were DH aluminum, this panel costs approximately \$9.87 per square foot, including all contractor's costs and fee; in other words, gross cost to the owner, except for architect's fees.

"(b) We have taken this same panel and substituted a 4" face brick facing for limestone. Including all of the items listed above, the gross cost of this wall is \$8.75 per square foot. (This is substantially the design of the Chrysler Building East.)

"(c) We have taken the basic panel and once again have substituted 4" of face brick for the limestone, except at the spandrels where we have introduced cast aluminum spandrels similar to those used in the Mutual Life Insurance Company building. The cost of this wall is \$10.14 per square foot.

"(d) In this study we have introduced the use of continuous prefabricated metal panels five sash wide, faced with 20 gauge stainless steel with a dull satin finish (as manufactured by the H. H. Robertson Company), backed with 2" of rock wool with a 1" plaster board covering, and faced on the inside with 18 gauge fluted steel, and covered with a continuous Hauserman type air conditioning enclosure. We have also provided continuous double hung aluminum sash between the column piers, the column piers being faced also with prefabricated metal panels. For this wall section, including the pertinent items of cost as in paragraph (a) above, the gross cost is \$10.30 per square foot. (Not having installed this section ourselves we would like to make the note that this cost is based upon the vendors' present quotations and in part upon their estimates of probable erection costs, which costs may vary, depending upon the finish selected by as much as 20%.)"

#### Metal Skin Promising

Mr. Perry pointed out that it would seem no metal skin type of spandrel wall has yet been produced which can compete in cost with the conventional masonry wall used in the finely finished multi-story office building, such as those quoted in New York, Boston and Pittsburgh.

However, he added, "There is the tremendous field of the industrial buildings and the commercial and institutional buildings on many of which the metal skin type of exterior wall, or the metal spandrel, or the thin section spandrel with metal and foam glass backing might compare not only successfully but at a saving in over-all cost. It may be interesting to some, however, to know that the Turner Company in the over \$1 billion of contracts they have executed, covering the construction of probably 2,500 buildings, the vast proportion of which in numbers has been industrial, have yet to build with two exceptions, any metal skin buildings other than numerous conventional steel and metal siding structures."

He pointed out that quantity production of standard panels for large industrial plants would be cheaper than the custom production of specially designed panels to fit a particular facade of a monumental building.

Referring to studies made on information obtained from the Turner Company's numerous conferences with leading manufacturers of metal skins or metal fascia plates, Mr. Perry stated, "In the development of new types of construction involving prefabricated units one must not forget that these assemblies have to be applied to a structural frame which is to a certain extent rough work. Structural steel with fireproofing, or a reinforced concrete skeleton are both field operations and as such do not always conform to the exact dimensions shown on the plans.

"Therefore any design of prefabricated metal units must allow for tolerances in the position of the members to which the units are attached. . . .

"It seems to us that before metal skin buildings would come into vogue, or thin section spandrels would be widely used, there is a great amount of research to be done by the manufacturers of stainless steel or aluminum or bronze, or other such materials, and/or by those fabricating companies working in such materials. To develop units or prefabricated sections, the cost of installation of which can be accurately figured by us general contractors, is a must."

Mr. Perry also warned of the possibility of trouble with labor unions and advised that the building trades union should be consulted before any prefabricated wall units are put on the market.

In conclusion, Mr. Perry asserted

that the basic requirement for successful use of metal spandrel walls lies with the detail and number of joints. He likened the exterior of a building to the scales of a fish, because the building will "inevitably breathe or move."

#### Encourage Research

"In our opinion great encouragement should be given those designers and manufacturers in their efforts to work out a practical metal skin for buildings or a prefabricated spandrel wall—in whole or in part. The advantages to be gained by success in their efforts are obvious. Among others are a substantial savings in floor space, probable cost economies, and substantial savings in weight with resulting smaller columns. Where foundations are difficult, this should be of real benefit. In all probability, there should be savings in time of completion of building. Considering the average 25 story building, taking 16 months from possession of site to occupancy, there might be as much as a month's saving with a successful design of metal skin building. . . .

"For those who are struggling with the details of joints and connections for metal skins for buildings, or seeking to develop satisfactory and economical non-load-bearing walls, it seems to me that substantial expenditures on research are justified."

The National Research Council expected that a full report of this B.R.A.B. conference would be published by early this month.

#### Method May Save Steel

Meeting probable shortages of cement and reinforcing and structural steel in highway building will be discussed at the convention of the American Concrete Institute in San Francisco, February 20-22, 1951. Prestressed concrete, successfully employed in the Walnut Lane Bridge, Philadelphia, has attracted favorable attention of engineers and may be the answer. Prestressed structures for freeways promise savings in cost, and would aid in the development of economical prefabricated designs in standard highway structures.

California's experience with prestressed concrete in a pedestrian bridge over Arroyo Seco will be described by Stewart Mitchell, California Highway Department bridge engineer, who will also discuss the use of prestressed concrete for highway bridges.

# Pushover for



**BOWLS OVER BOULDERS**—Exclusive International fuel injection system automatically proportions fuel to meet changing load requirements, helps keep TD-24 from bogging down when going is really rough.



# the Champ

The champ makes it look easy. The champ has the crowd with him. The champ takes on all comers.

What makes the champ the champ?

In a man it's guts, strength, skill and a fighting heart.

In the TD-24 it's gears, metal and go, translated into irresistible strength, stamina and "handle-ability."

Here are a few things that make the biggest job a pushover for the TD-24.

**148 maximum drawbar horsepower—more than any other crawler.**

**Eight forward speeds, eight reverse.**

**Speeds up to 7.8 mph in either direction.**

**Synchromesh transmission—you "shift on-the-go."**

**Exclusive International push-button, all-weather starting.**

**Planet Power steering, finger-tip control for pivot turns, feathered turns, turns with power on both tracks plus instant shift up or down one gear without declutching.**

**Reserve torque to make the TD-24 hang on to overloads and walk away with as much as ten cubic yards on the blade.**

The word is out on the "grapevine." At conventions, bid-openings, contract-lettings, contractors are telling each other how the TD-24 does more work with more speed—has more lugging ability—moves more pay-dirt faster than any other crawler on the market.

Want more facts . . . more proof? Ask your International Industrial Distributor for the low-down on the TD-24. You'll be a TD-24 man from then on in!

INTERNATIONAL HARVESTER COMPANY  
CHICAGO 1, ILLINOIS

**POWER THAT PAYS**

INTERNATIONAL



## Youtz-Slick Method Licensed to Long Co.

• Kansas City Contractor May Supply Service to Others

» THE Long Construction Company, A.G.C., Kansas City, Missouri, (building and heavy) has licensed the Youtz-Slick Lift Slab Building Method developed to reduce building costs, the Institute of Inventive Research has announced.

Termed by the Institute as "the greatest forward stride in building construction in half a century," the method, which employs especially designed automatic lifting equipment to raise reinforced concrete roof and upper floor slabs into place on steel columns after they have been poured on the ground, has been successfully used on a number of buildings in the Southwest.

The Institute, which developed the new system over a two-year period in collaboration with its affiliated Southwest Research Institute, has licensed the Long Company not only to use the method itself, but to supply the service to other building contractors.

Robert W. Long of the construction firm expressed satisfaction that his firm is among the first to utilize this new cost-saving method of construction which, among other things, protects workmen during the construction and with unobstructed space for storing and assembling materials, permits the contractor to complete his work safely and comfortably.

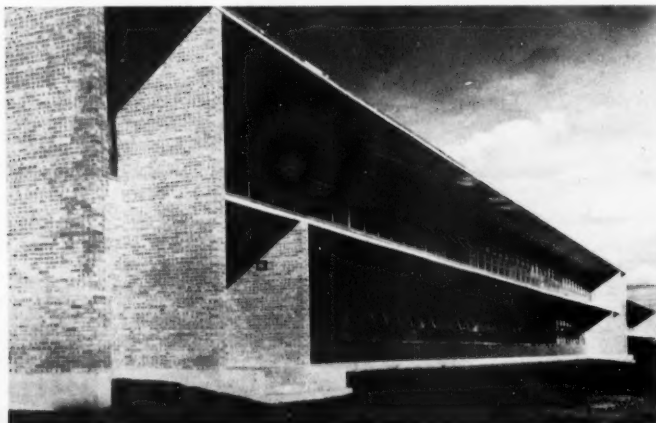
He said that after much study he was convinced that this method of construction can save critical materials and at the same time produce a completely fireproof building in a much shorter time than by ordinary methods. "These two considerations alone should be of great importance in the present emergency," he commented.

The Long Construction Company will start immediately using the Youtz-Slick method. Benefits of the method are listed as follows:

Economy: the pouring and fabrication of all roofs and floors at ground level; elimination of forms, centering, scaffolding and hoists; efficient carrying forward of work on completed floors; protection of workmen from many hazards; and faster construction generally.

For the building owner or tenant, the method permits a structure with maximum uninterrupted space which can be divided as required, optimum natural lighting unrestricted by outside bearing walls, and smooth ceilings unmarred by girders and beams. It further means meeting standard construction building code requirements and freedom in planning without limitations of structural walls.

The method was named for its co-inventors, Philip Youtz of New York and Tom Slick of San Antonio.



Photograph shows one section of the 44,500-square-foot Trinity University Administration Building, San Antonio, Texas, which was erected by the James Stewart Company, A.G.C., of New York, Chicago and Dallas, employing the Youtz-Slick method.

## New Use for Microscopes

Research men are successfully employing microscopes in the study of cement hydration, the Calcium Chloride Association announces. Both petrographic and metallographic microscopes are used in tests to evaluate the degree of hydration in the early stages of concrete curing.

## Institute Announces Projects

The Southwest Research Institute, San Antonio, Texas, has under way projects on making shingles which won't discolor, building masonry walls which are moisture-proof, reducing fire hazards, controlling flame spread, and curtailing danger of toxic fumes from fires.

The Institute recently developed the Youtz-Slick method which utilizes concrete slabs poured on a base slab and raised into place as upper floors and roof by automatic lifting equipment.

## Wood as Steel Substitute

Recent curbs on the civilian use of steel have brought lumber to the fore as a substitute for many structural purposes, by use of steel-ringed timber connectors which add the strength of steel to the durability of lumber.

During World War II approximately 200,000 tons of steel were saved by the technique used extensively in both civilian and military construction by employing connector-supported timber where specifications originally called for structural steel. Towers, bridges, hangars, warehouses and other military installations were made of wood.

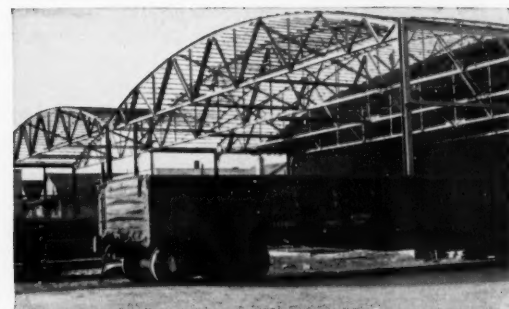
For example, timber connectors made possible the erection of a Navy blimp hangar, 1,000 feet long, 153 feet high and with a roof span of 237 feet. This structure, without the connectors, would have required 2,050 tons of structural steel.

The connectors are pressed steel or malleable iron rings ranging from 2½ to 4 inches in diameter. Placing these rings in circular grooves between adjacent faces of overlapping timbers, they provide a larger supporting area than is possible by any other joining methods.

The connectors are a development of an engineering and research affiliate of the National Lumber Manufacturers Association.



**BEST WAY TO SPEED A PLANT EXPANSION  
PROGRAM — A Macomber Steel Building  
Of Standardized Structural Units**



**INCREASED PRODUCTION FACILITIES FOR  
ESSENTIAL INDUSTRIES — THE FAST WAY**

Macomber Standardized Structural Members provide the designer and builder a means of getting under way in the shortest possible time on an industrial plant job.

This universally accepted type of structure gives the designer unlimited freedom and the builder the type of products his men know how to handle best.

Basic to all construction men are Macomber Steel Trusses, Purlins, Eave Struts and Steel Columns with standard wall construction. There remains only the location of the steel sash and doors to have a thoroughly practical, permanent investment in a plant addition. Write for complete information.

**STANDARDIZED STEEL BUILDING PRODUCTS**



**MACOMBER • INCORPORATED  
CANTON, OHIO**

IN CANADA, SARNIA BRIDGE CO., LIMITED, SARNIA, ONT.  
IN MEXICO D. F.—MACOMBER DE MEXICO S. A. CEDRO 500

V BAR JOISTS • LONGSPANS • BOWSTRING TRUSSES • STEEL DECK

# 10 GIANT-SIZED speed OAHE DAM fill

*3 30-yd. and 7 22-yd. units deliver  
667 pay yds. hourly on 1½-mi. cycles*

With approximately 3½ million yards of sand, gravel, clay and shale to move on Oahe Dam subcontract at Pierre, South Dakota, Campbell & Collins Joint Venture of Fargo, N.D., assigned 80% of total dirtmoving to 10 giant-sized, rubber-tired A Tournapulls. Seven of the 240 h.p., two-wheel "A" prime movers were coupled to 25-ton (22-yd.) E-25 Carryall Scrapers and three to 35-ton (30-yd.) E-35 Carryalls. Here's a report on how their performance is speeding this Missouri River flood control project:

When these pictures were taken, the fleet was hauling tough, sun-baked sandy clay from 2 pits, one with loading on the level and the other with loading down 35% grades. Time and distance for obtaining loads varied widely, even within the same pit, due to necessity of selecting soil to meet U.S. Engineer fill requirements. In the level pit, two 144 h.p. pushers teamed up to help Tournapulls get heaped loads in 70 to 115 seconds (average, 93 seconds) with a load distance 175 to 250 ft. In the downhill pit, using one 144 h.p. pusher, Tournapulls cut load time to 25 to 55 seconds (average, 38 seconds), and load distance to about 75 ft. From both pits, the E-25 Carryalls were getting average loads of 16 pay yards... the larger E-35's, 21 pay yards.

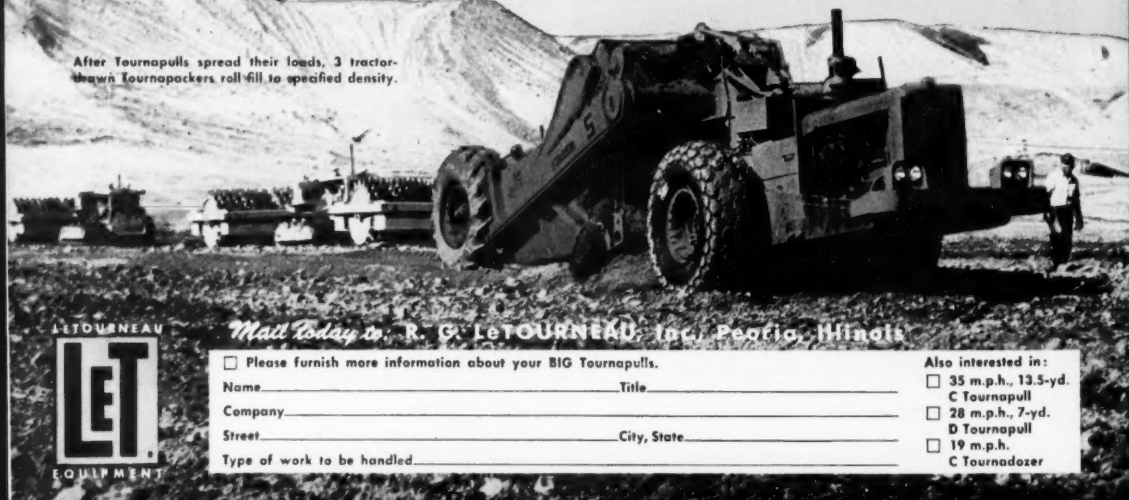
Haul cycles from both pits averaged 1½ miles...with 3700 ft. of favorable 9% grade to dump and 4225 ft. of adverse 0 to 14% grades on return. Giant 4-wheel air brakes—with 1812 sq. in. of braking surface on each wheel—permitted safe use of haul speeds up to 34 m.p.h. Dumping on the run helped each electric-control Tournapull complete a 7,925-ft. round trip every 13.1 minutes. On the basis of 50-minute efficiency, that's 3.8 trips per hour per unit, and an hourly output for each of the 7 E-25 scraper-equipped rigs of 61 cubic yards and for each of the 3 E-35's of 80 cubic yards.

## Drive 190 miles to Pierre

Six of these Tournapulls are veterans of another big earthfill project—the Shadehill Dam, built across the Grand River near Lemmon, South Dakota. Their efficiency record on this job for the entire 1949 season was 85%. When their work here was finished, the 6 rigs drove under their own power to Pierre...a 190-mile trip through main highway traffic.

Like Campbell-Collins, it will pay you to investigate the big pay loads and new low dirtmoving costs possible on your work with these mobile, 35-ton (30-yd.) and 25-ton (22-yd.) A Tournapulls. Your LeTourneau Distributor has all the facts...call him, or write TODAY.

After Tournapulls spread their loads, 3 tractor-drawn Tournapackers roll-fill to specified density.



LETOURNEAU



EQUIPMENT

Mail Today to: R. G. LeTOURNEAU, Inc., Peoria, Illinois

☐ Please furnish more information about your BIG Tournapulls.

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Street \_\_\_\_\_ City, State \_\_\_\_\_

Type of work to be handled \_\_\_\_\_

Also interested in:

☐ 35 m.p.h., 13.5-yd.

C Tournapull

☐ 28 m.p.h., 7-yd.

D Tournapull

☐ 19 m.p.h.

C Tournadozer

# "A" *TOURNAPULLS* for Campbell-Collins



By September, 1950, 6 of Campbell-Collins' A Tournapulls had worked 4000 hours each on Shadehill and Oahe Dams ... 4 newer "A's" had clocked 500 hours each here at Oahe. The Oahe job is being subcontracted from Guy H. James Construction Company of Oklahoma City, Oklahoma.

Tournadozer, Tournapull, Carryall, Tournapacker—Trademark Reg. U.S. Pat. Off. C141

**LETOURNEAU**  
PEORIA, ILLINOIS



**TOURNAPULLS**

FOR LOWEST NET COST PER YARD

## Oakland Viaduct Required Some Ingenuity

- Site between Lake and Busy Street a Problem for Engineers

» BUILDING the Shore Line Viaduct at 12th Street in Oakland, California, presented a neat construction problem to the general contractor, the Charles MacClosky Company, A.G.C., of San Francisco.

The site of the project was a tidal mud flat lying between a heavily travelled thoroughfare and the waters of Lake Merritt. To provide working space and hauling facilities, it was necessary to build a dike and construction road on the lake side. All excess earth material was utilized to construct this operating base.

The handsome, reinforced concrete structure, which has just been completed, is called the "Frickstad Viaduct" in honor of the engineer who made it possible, Walter N. Frickstad. The lines of the viaduct conform to the architectural motif of the new Civic Center of Oakland in which it is located.

### Handling of Piling

Forty-two slender concrete piers support the continuous concrete slab, 1,000 feet in length. Timber pile foundations approximately 80 feet

deep were driven to support footings.

Excavating for footings in clay that was several feet below lake level, driving piles and pouring concrete footings without going into a costly program of sheathing and lagging to provide bank support were ticklish problems. Careful and speedy handling in unison of these three separate operations surmounted the problem effectively. Working from the temporary dike road, a crawler crane excavated the trenches for the pile cap foundations. Following this operation, the pile driving crew punched the timber piles down to bearing capacity of 35 tons, using a skid mounted rig.

### Footings and Falsework

As each footing was pumped dry, piles were cut off to grade while workmen completed trimming the excavation and placing the forms for concrete. Reinforcing steel for the footings was made into prefabricated cages, lowered into place and then concrete was poured into the forms. Using this method, several footings were often completed in a single shift. A second crew followed up with the erec-

tion and pouring of the 42 piers.

Deck forming came next with falsework for deck bents consisting of two rows of 8" x 8" posts bedded on the newly constructed concrete footings and supplemented by a middle row of posts in wood cribbing. To give intermediate support to the 22' deck span, each bent of posts was capped with two laminated 9" x 16" timbers. To maintain camber and banking for super-elevation in the 15-inch-thick deck, all posts were precut to proper individual heights. This falsework was topped off with 2" x 12" joists and plywood decking.

### 4,200 Yards Poured

Each reinforced deck pour was approximately 40 feet wide by 90 feet long between expansion joints and contained up to 220 cubic yards of concrete per section. The major portion of over 4,200 cubic yards of concrete was placed by truck crane and concrete bucket supplied by transit-mix trucks. Buggies were used on two intermediate deck sections because of their extra width.

D. J. Bressi was field superintendent for the Charles MacClosky Company and John A. Morin acted as supervising engineer for the Oakland Department of Streets.

**Completed Viaduct Is Shown Below. Inset Shows Progressive Operations.**

(Oakland Tribune photo)





## St. Louis Bridge Study For Riveter's Camera

These progress photographs of the Mississippi River bridge joining East St. Louis, Illinois, with St. Louis, Missouri, were taken by Louis E. Taylor of St. Charles, Missouri, a journeyman steelworker who is also an expert photographer. He sold a number of his shots to the Bethlehem Steel Company which supplied the steel work, and to Hazelet & Erdahl, consulting engineers on the project. The bridge, which was completed last fall, carries much of the traffic between the two cities which had been causing congestion on existing bridges. The superstructure required 4,800 tons of steel,

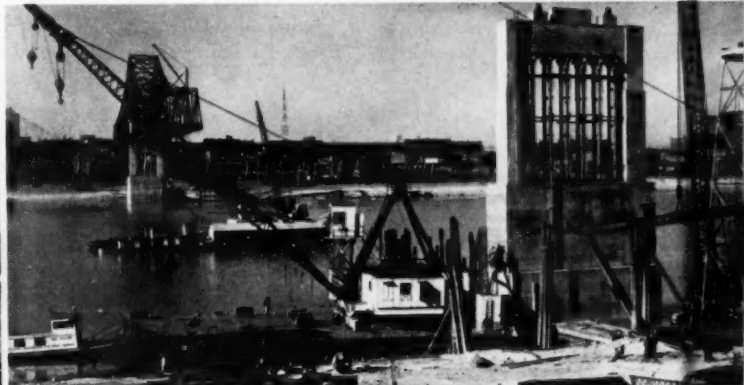
and 2,000 tons of concrete was required on the roadways.

(Bottom picture) Completed bridge as seen from the East St. Louis shore. Taken from the Eads Bridge.

(Center right) Bridge under construction with U. S. Engineer derrick barge in foreground. West cantilever span is shown in the background.

(Center left) Erecting steel on buttress on east side of Mississippi.

(Top right) Workmen erecting a top strut, the last piece of steel on the bridge. Mr. Taylor drove the rivets on this piece.





## Koehring 34-E *twinbatch* Paver

can hit a top output of 86.7 batches an hour, on 60-second mixing time. This reserve production capacity can be used to pick up lost time from normal production delays . . . assures 50 batches an hour, 8 hours a day, at no increase in batching, hauling and finishing equipment. Limited-production, single drum paver theoretically mixes up to 50 batches an hour, but usually averages only about 45 batches. Under identical job conditions, and with same auxiliary equipment, Koehring 34-E *twinbatch* gains 5 extra batches an hour . . . 40 extra batches daily. Yet, it requires only approximately 3 extra batches a day to offset the slight additional cost of the 34-E *twinbatch*

Paver. That leaves a net gain of 37 extra batches daily to help maintain schedules, handle more jobs per season, and earn more profits per job. There's no extra paver operating expense, service or maintenance, because the 34-E *twinbatch* is as simple as a single drum machine. Basic units are the same, except for double compartment drum . . . and, with split-second Autocycle control, every mixing operation is automatic, accurate and fast.

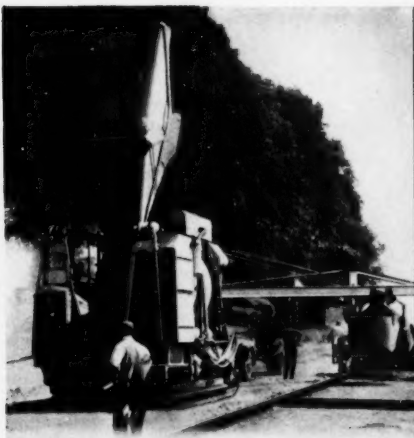
See for yourself why you will be miles ahead on your highway, airport and other big production paving contracts with a Koehring 34-E *twinbatch* Paver. Get complete information from your Koehring distributor, or write for new 18-page catalog.

**KOEHRING COMPANY**, Milwaukee 16, Wis.



# KOEHRING *twinbatch*® PAVERS

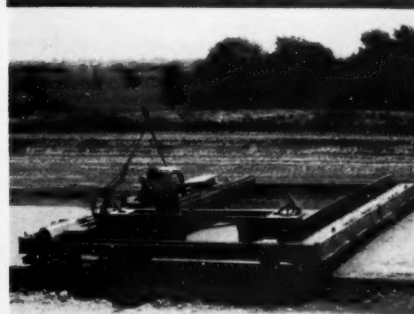
SUBSIDIARY COMPANIES: LARSONS • KYLE-HICK • LEXMAR



Roomy, flow-line ship is 120" wide for charging with dual-tired batch trucks . . . big throat discharges almost full batch during 8-second ship hoist. Special A-frame elevates boom 30', discharges bucket 13½' high.



Koehring rubber-tired 16-E twinbatch has 60' elevated boom, discharges controlled batch at 21' height (higher with special boom). Mixes, distributes up to 50 cu. yds. per hour. Travels job to job at 6 m.p.h.



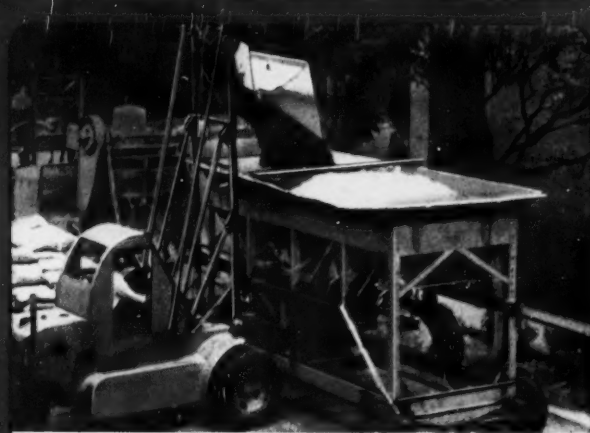
For "timely", precision-finishing with plenty of reserve speed, Koehring Longitudinal Finisher operates at almost twice the speed of a modern 34-E paver . . . produces mechanically-accurate slabs 8 to 30' wide, uniform crown transitions, 1-man operation.



## 250 TRENCHLINER® digs up to 9¾' per min.

. . . cuts 16 to 42 in. wide, up to 12½ ft. deep . . . digs within 11 in. of either side of machine. Friction clutch gives operator accurate, positive control of digging boom for close grade alignment, and hoists boom to travel position in less than 1 minute. Reversible power-shift conveyor, safety overload clutch, oscillating 3-point crawler suspension and rigid arch-type main frame all help keep production high, costs low with this heavy-duty 250. Larger or smaller Trenchliners also available . . . see your Parsons distributor now.

**PARSONS Company, Newton, Iowa** (Koehring Subsidiary)



## LO-BIN Batcher holds 8, 20, or 30 tons

. . . has low charging height. 8-ton Johnson Lo-Bin Trolley Batcher is only 7½ ft. high; flared extension panels give 20-ton capacity at 8½ ft. height, 30 tons at 9½ ft. Has 2, 3 or 4 compartments, up to 4 weigh beams, 22 or 44 cu. ft. weigh hoppers . . . also can be arranged for 2 or 3 aggregates and 1 bulk cement compartment. Efficiently serves 28-S, 16-S, 11-S, 6-S mixers. Quickly dismantled, easily moved on dump truck. Optional: wheels, tires, tow bar. See your Johnson distributor, too, for mix plants, buckets, bins, silos.

**C. S. JOHNSON Company, Champaign, Ill.** (Koehring Subsidiary)

## BPR Tells Roads Builders to "Go Slow"

### • Advises Holding 'I'p Pending Controlled Materials Plan

» HIGHWAY departments have been advised by the Bureau of Public Roads in a telegram dated January 19, 1951 to "go slow" in advertising and awarding projects other than access roads which involve use of critical materials until the National Production Board has clarified and determined a policy concerned with a controlled materials plan.

The NPA has announced that it is giving careful study to a controlled materials plan, and the Bureau's advice is to await the development of

this plan. Meanwhile highway officials believe that work on the interstate system and essential roads will continue, but always with an eye on what the controlled materials plan will demand.

In addressing the annual convention of the American Association of State Highway Officials in Miami last December, Commissioner MacDonald stressed the urgency of a survey of their requirements in road materials by the state highway departments (January *CONSTRUCTOR*, Page 45).



Contractor Uses Trailer Offices, Radio

Job headquarters of the Grandview Construction Company, A.G.C., Mt. Vernon, New York, on the 118-mile New Jersey Turnpike, consists of four trailers in the form of a cross. Short wave radio makes possible communication with seven jeeps and other equipment operated by the contractor at various distant points. Illustration of the interior of the radio station shows how completely the office is furnished.



The Bureau of Public Roads has been named the claiming agency which will assemble all information on materials needed for all road and street construction and maintenance and present it to the NPA.

The Bureau of Public Roads is one of 20 federal agencies designated to secure materials requirements on a wide range of programs. So far their activities have been confined to gathering information. They have as yet no actual materials to allocate.

At the same meeting, Mr. MacDonald said, "Fortunately the road building program does not require the more critical items, and there should be sufficient steel available since so limited a percentage of the total output is required."

General Philip B. Fleming, head of the recently organized Transportation Council, on the same A.A.S.H.O. program, announced that requirements of all agencies would receive the ultimate in consideration and fair treatment. "It is an open secret that during the last war there was a general tendency to regard our highways as expendable . . . we are going to take a longer, and I think a more constructive view, in the emergency period that lies ahead."

### Maintenance by Contract

Minnesota's Department of Highways is awarding to contractors the work of cleaning and resealing joints in portland cement concrete pavements. The maintenance department is well satisfied with the prices bid for the work and is now planning additional projects by this method.

The job consists of cutting out the old filler, cleaning the edges of the joint and resealing the joint with a rubber-asphalt sealing compound of the hot-poured type. The contractor is required to furnish all construction supplies and equipment, and erect necessary barricades and warning signs which are supplied by the State.

Minnesota maintenance engineers report that they are pleased with the way the contractors attacked the job to be met. They also were impressed with the varieties of methods and tools explored and developed in order to do the work most effectively.

Total of the three contracts to date is \$131,000. The A.G.C. of Minnesota was instrumental in getting the department to do the work by contract.



## Snow Wins in Snowshed Construction Handicap

TWO A.G.C. firms, one a highway contractor and the other a building contractor, teamed up to carry out a \$1,015,620 state contract for two snowsheds, 1,800 feet in length, in Washington's Snoqualmie Pass, lost their race with winter. A heavy snowfall in November forced the suspension of operations by the C. V. Wilder Company, highways, and the Gaasland Company, building, both of Bellingham, Washington, before the concrete paving was finished. However, the structure was completed to the extent that traffic is now using the sheds over a crushed gravel surface.

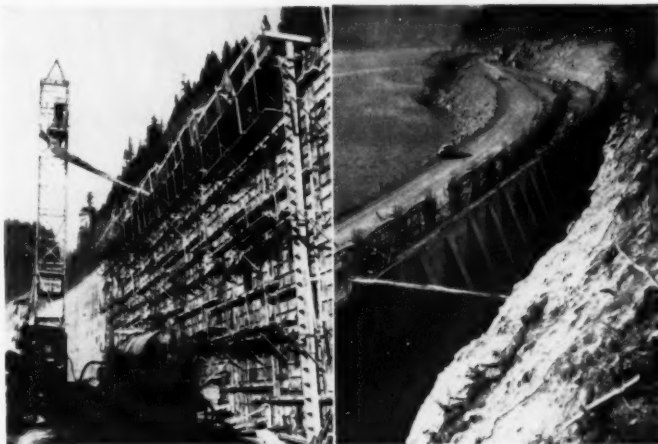
The 500-foot shed at Lake Keechelus and the 1,300-foot shed at Airplane Curve are built to keep U. S. Highway 10 serviceable during the winter months. Drifts from six to 20 feet in depth and dangerous snow slides often tie up traffic at these points.

The contractors were racing against time to complete the structures before it began to snow in earnest, but they were opposed by continual bad weather during the last few weeks of operations. However, they did complete all structural concrete and the placing and grouting of roof beams on both sections of the project. Finishing of exposed concrete surfaces and paving of the roadway will be completed this year, probably starting about June 1.

When the project is completed, some 10,000 cubic yards of structural concrete will have been poured, not including precast beams totalling 3,121 cubic yards and 5,205 square yards of eight-inch concrete paving.

To pour concrete for the job, E. V. Shields, superintendent for the Gaasland Company, built a batching plant half-way between the two projects. Dry batches were hauled by truck to the pour. Each pour consisted of a 100-foot section of the main retaining wall 28 feet, three inches high with its counterforts.

Use of conventional wood forms would have meant costly lumber transportation, so the Uni-Form system of concrete forming was chosen because the combination plywood face and steel frames offered exceptional advantages. Engineers of the Universal Form Clamp Company, Chicago, makers of the system, worked out all engineering problems in advance, so that no time was lost. Credit is given Uni-Form for expediting the job.



(Left) Pouring wall section on the west end of Airplane Curve Snowshed.

(Right) Completed retaining wall with counterforts on same job.



Installing roof beam sections on the Lake Keechelus Snowshed.



Placing roof beam sections on the Airplane Curve Snowshed—taken from the west portal. Old highway is seen at the left.

# HIGHWAYS

## THROUGH LOW



### THE IOWA LINE *of Material Handling Equipment Includes:*

• ROCK AND GRAVEL CRUSHERS •  
• BELT CONVEYORS • STEEL BINS • BUCKET ELEVATORS • VIBRATOR AND REVOLVING SCREENS • UNITIZED ROCK AND GRAVEL  
PLANTS • FEEDERS • TRAPS • PORTABLE POWER CONVEYORS • PORTABLE AND STATIONARY STONE, GRAVEL AND SAND PLANTS •  
REDUCTION CRUSHERS • BATCH TYPE AND VOLUMETRIC TYPE ASPHALT PLANTS • DRIERS • DUST COLLECTORS • HAMMERMILLS  
• DRAG SCRAPER TANKS • WASHING PLANTS • VIBRATING SOIL COMPACTION UNITS • DOUBLE IMPELLER IMPACT BREAKERS

# UNLIMITED

## COST AGGREGATE

TODAY'S production of more and better aggregate *at lower cost* means highways unlimited for America's future . . . and unlimited opportunities for you. Roads—both black top and concrete—bridges, dams, buildings and so many other construction projects, need hundreds of millions of tons of aggregate.

When you figure future contracts, plan on the bidding advantages you get with Cedarapids equipment. Whether you need a single unit or a complete plant, for aggregate or black top, Cedarapids assures the low cost production and operation that keeps you ahead of the competitive parade. Your nearest Cedarapids distributor will be glad to give you all the details.

MODEL "E"—the largest of the Cedarapids line of bituminous mixing plants will handle up to two tons at a batch for your big jobs. Or—if you need only a few loads for patching—use the Cedarapids continuous-mix type Patchmaster. Whatever equipment you require for mixing your black top, check with Iowa first for the best—complete plants, pug mills, driers, feeders, bins.

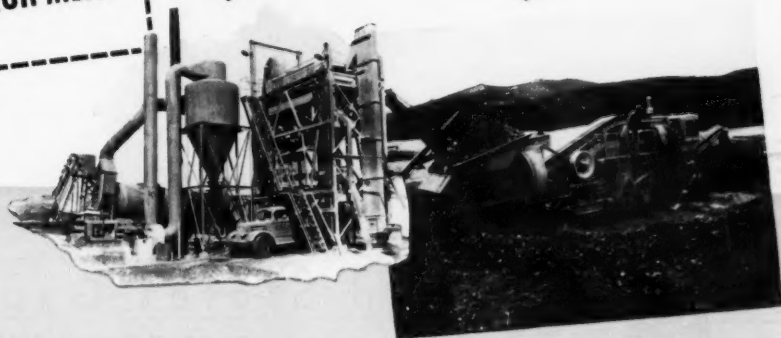
The JUNIOR TANDEM—best known of the Cedarapids portable plants sets the standard for quality production, big capacity, flexibility, low maintenance and trouble-free operation on average size gravel jobs. When big volume is required, pick the Master Tandem and for the smaller jobs—the Pitmaster. Add a Cedarapids Portable Primary and you have a rock plant. With Cedarapids equipment, you can meet any specification in any quantity.

**Cedarapids**

Built by  
IOWA

headquarters for

Quality EQUIPMENT



### IOWA MANUFACTURING COMPANY

Cedar Rapids, Iowa, U. S. A.

DID YOU SAY "WHO-O-O-O?"

It's U.S.G. roof deck contractors, of course...who build

## SHEETROCK - PYROFILL

T. M. Reg. U. S. Pat. Off.

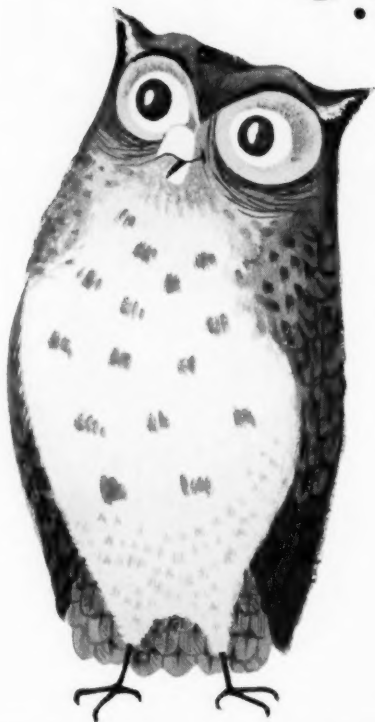
**poured-in-place gypsum roof decks**

It's always wise to stick to the specifications . . . and specifications that call for SHEETROCK-PYROFILL call for your U.S.G. roof deck contractor. *For only U.S.G. roof deck contractors can install SHEETROCK-PYROFILL roof decks.*

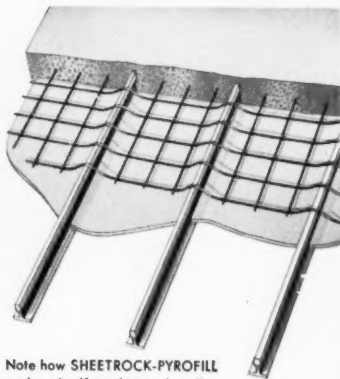
Not only does the roof deck they build meet the most exacting requirements because it's incombustible, lightweight, strong, and easy to maintain . . . it meets your construction schedule because SHEETROCK-PYROFILL is quickly installed—up to 20,000 feet poured a day—and sets in less than 30 minutes.

Besides SHEETROCK-PYROFILL, U.S.G. roof deck contractors also erect roof decks of USG Precast Metal Edge Gypsum Plank and Short Span Tile.

For the name of your U.S.G. roof deck contractor, write Industrial Sales Division, United States Gypsum Company, Chicago 6, Illinois.



Plant of Westinghouse Electric & Manufacturing Co., Chicago. Bruce A. Gordon Co., Chicago, engineers. Sheetrock-Pyrofill Roof Deck (263,000 sq. ft.) installed by Anning-Johnson Co., Chicago



Note how SHEETROCK-PYROFILL anchors itself to the steel purlins



# United States Gypsum

**For Building • For Industry**

Gypsum • Lime • Steel • Insulation • Roofing • Paint



» THE New York Building Code Commission recently announced a broad policy in the distribution of its codes, technical bulletins, newsletters and other documents envisaging comprehensive coverage of important factors in the state and nation concerned with building. This policy was adopted because the Commission feels that building is no longer a local industry, a misconception that has made many local codes obsolete and antiquated.

"This distribution policy is particularly important in view of the fact that the Commission's rules and regulations have full force and effect of law without detailed enactment of the provisions of our codes by legislation," said Commissioner Ralph A. Lehr, of Buffalo. "The legislature conferred this extraordinary power on the Commission because it was essential that our codes be readily adaptable to changing conditions within the industry without prolonged legislative deliberations."

The commissioner called attention to the fact that more than 2,000 manufacturers of building products marketing their wares on a national basis had to reconcile their operations to diverse obsolescent local codes, with standardi-

## New York Building Code Making Strides

• Commission Will Distribute Its Information to 36 States

zation of products and resultant savings to the consumer impossible of attainment.

The Commission has established liaison with the top officials of agencies in 36 other states concerned with building operations on a state-wide basis. The purpose of this liaison is to further reciprocal exchange of information on building codes in order to advance uniformity and improvement of building laws and regulations not only in New York, but in all participating states. The Building Code Committee of the American Institute of Architects favors building code improvement through individual state action and this step is in harmony with its recommendation, points out George Bain Cummings, vice-chairman of the Commission.

In a survey which preceded the establishment of liaison, the Commission found that several states are engaged in furthering on a state-wide basis plans or proposals for dealing with building code problems common to

nearly all the municipalities of the country.

"State agencies throughout the nation have manifested a lively interest in the pattern being evolved in New York State and are watching the work of the Commission in view of its broad powers, the scope of its program and its procedures. They are especially interested in our approach to a performance-type code, administered and enforced at the local level," said Vice-Chairman Cummings.

"It is our belief that the liaison mechanism being established with other state agencies may be a medium for accelerating code improvement on a nation-wide basis."

Specific requests for copies of the N. Y. Building Code Law have been received from 1,156 municipal officers representing 1,073 cities, incorporated villages and towns. This is approximately three times the number of municipalities in New York State known to have codes or other building regulations in force at present.

## A.I.A.-A.G.C. Group Studies Many Questions



Oscar—Chicago

At A.I.A.-A.G.C. meeting, left to right: Welton A. Snow, Washington, D. C., A.G.C. Co-Secretary; Theodore I. Coe, Washington, D. C., A.I.A. Co-Secretary; Ellis W. Barker, Salt Lake City, Utah, A.G.C.; Arthur H. Wells, Chicago, A.G.C. Co-Chairman; Earl T. Heitschmidt, Los Angeles, A.I.A.; Max Foley, New York City, A.I.A. Co-Chairman; E. J. Wheeler, Cincinnati, Ohio, A.G.C.; Edward G. Conrad, Cleveland, Ohio, A.I.A.; and Harry B. Tour, Nashville, Tennessee, A.I.A. A. L. Atherton, Seattle, Washington, A.G.C. attended the meeting, but is not shown in the picture.

» COMPLAINTS over excessive use of alternate bids, withholding payments to subcontractors under certain conditions, proposed modification of American Institute of Architect's standard contract form, possible revision of A.I.A. short form contract, insertion in specifications of a definite format of form to be used for changes, and other matters pertinent to architects, general contractors and the construction industry were taken up at a meeting last month of the joint committee of the A.I.A. and the Associated General Contractors of America at the Edgewater Beach Hotel, Chicago.

Other items on the agenda included legal objections to the A.I.A. form of contract, approval of shop drawings, relationship between general contractors and subcontractors and better working conditions between architects and contractors. Need for emergency contract provisions and escalator clauses received the conferees' consideration.

The outcome of these deliberations by the joint committee will be published and distributed to all chapters and branches at an early date.

## Lumber Consumption 42 Billion Feet in 1950

» CONSUMPTION of lumber in the United States during 1950, including imports, probably amounted to more than 42 billion board feet, according to estimates in the Lumber Survey Committee's report to the Secretary of Commerce. This figure compares with almost 36 billion used during 1949.

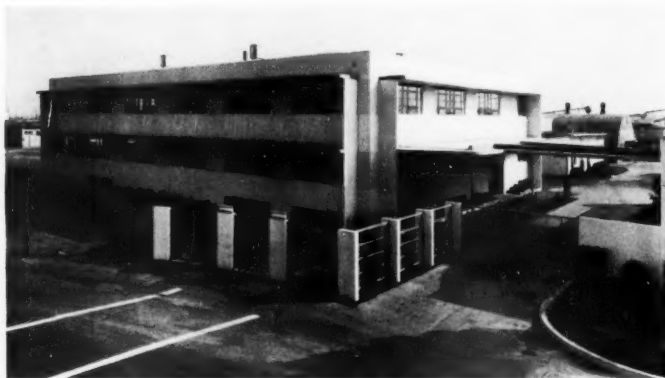
R. A. Colgan, Jr., committee chairman and executive vice president of the National Lumber Manufacturers Association, acknowledged that average prices increased during the third quarter of 1950 (the Bureau of Labor Statistics reports a 15 per cent increase in construction lumber), but claimed prices of certain species and grades "have declined rapidly during October and early November," because of restrictions on housing credit and a general feeling of uncertainty.

The committee complained that the

restrictions have resulted in a serious decline in housing credit applications and that "so far there is no assurance that military programs will require the entire quantity of lumber which will be displaced from consumption by the housing curbs."

Third quarter production of 11 billion board feet was reported another quarterly record. Shipments also were at highest levels despite the worst freight car shortage in many years, but were 3.1 per cent less than production. Temporary loss of intercoastal vessels on the West Coast following the Korean outbreak added to shipping shortages.

Total mill stocks at the end of the third quarter were estimated at 6,441 million board feet, the first increase in inventories registered by the industry in more than a year.



New Building Marks Firm's 60th Birthday

The Fluor Corporation's new \$400,000 engineering building in Los Angeles was recently dedicated at ceremonies celebrating the 60th anniversary of this A.G.C. firm.

The construction is of precast reinforced concrete with walls raised by the newest tilt-up methods. The building, air-conditioned throughout, contains 27,000 square feet of floor space and provides facilities for 150 draftsmen and 25 project engineers on the two main floors.

Basically the building consists of a series of five horizontal rows of precast slabs placed one on top of the other. The floor system and exterior

columns were poured in place of light weight punice concrete to form the structural support for the building and to tie the wall panels together as a unit. The roof consists of wooden trusses with hung ceiling on each floor. Windows are steel sash casement, cast into basement panels and placed in precast slots of upper story panels. Exterior sunshades are supported by steel frames cantilevered from the building and covered with a hung stucco surface.

Precasting of various units allowed several phases of the construction to go on simultaneously, resulting in a considerable shortening of construction time.

## A.I.A. Dispersal Program

A program to disperse "major target areas" in the United States through redirection of new plant construction and housing into the creation of new towns in outlying parts of metropolitan areas was proposed last month by the American Institute of Architects.

A.I.A. spokesmen suggested ceilings on the growth of our largest and most vulnerable cities; channeling new growth into outlying communities of limited size, widely separated by agricultural and park zones; and reorienting private and public construction programs already in operation.

The entire issue of the institute's *Journal* was devoted to the plan, including articles on postwar studies of the economic and technical feasibility of new towns. Albert Mayer, New York architect, in one article, criticized the plan to disperse Washington federal buildings as a "timid half-way proposal," and termed the cost of building and equipping bombproof shelters in general "sheer waste" as compared with the alternatives of planned urban decentralization.

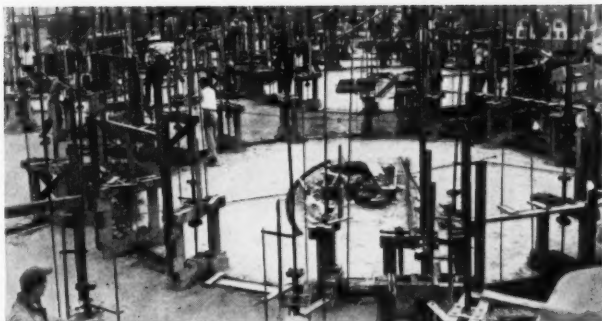
## Slum Clearance Extended

The time in which communities may request initial reservations of capital grant funds for slum clearance and urban redevelopment projects under Title I of the Housing Act of 1949 has been extended by six months, through June 30, 1951, by the Housing and Home Finance Agency.

By the middle of January, more than 230 communities had reserved more than \$170 million of the \$500 million available under the program, which may be used to pay up to two-thirds of the deficit incurred in acquiring, clearing, and disposing of a slum site.

A postoffice and courthouse building in Brunswick, Georgia, and a post-office annex in Boston recently were approved by General Services Administration and the Postmaster General for the acquirement of sites and preparation of drawings and specifications for their future construction. The projects are among the few to be okayed as essential to defense of government service since the President ordered curtailment after the Korean outbreak.

Forest of jack rods and temperature steel ready for pouring concrete walls.



Distribution of aggregate was uniform, the concrete highly plastic and cohesive—characteristics of concrete made with Lehigh Air-Entraining Cement.

## No drop-outs, no honeycomb with LEHIGH Air-Entraining Cement



Job progress was constant around the clock, with bin walls 130 feet high completed in ten days.

Builders: WILLIAM NEILL CONSTRUCTORS, INC., 30 Vesey St., New York City. Ready Mix Concrete: HENRY K. SMITH, Palmyra, Pa.

Sixteen cacao-bean storage bins, with a capacity of 32,000 tons, equipped to take train-lots and to unload at the rate of 110 tons per hour! This new construction is a striking example of the continuous progress of the world's largest manufacturer of cocoa and chocolate—Hershey Chocolate Corporation, Hershey, Pennsylvania.

These bins of slip-form construction are the largest of their type built for cacao-bean storage... and

for the plastic, cohesive and uniform concrete, essential in this method of construction, the builders, William Neill Constructors, Inc. used Lehigh Air-Entraining Cement with these results:

Although the air-entrained concrete required less water, placing and consolidating around the reinforcing was much easier... excessively wet batches that cause drop-outs and honeycomb were avoided... the work was completed ahead of schedule. And the surface of the concrete was so dense and smooth that little finishing was needed.

Our Service Department will be glad to help you with your specific problems.



**LEHIGH PORTLAND CEMENT COMPANY**  
ALLENTOWN, PA. • CHICAGO, ILL. • SPOKANE, WASH.

LEHIGH PORTLAND CEMENT • LEHIGH EARLY STRENGTH CEMENT • LEHIGH AIR-ENTRAINING CEMENT • LEHIGH MORTAR CEMENT

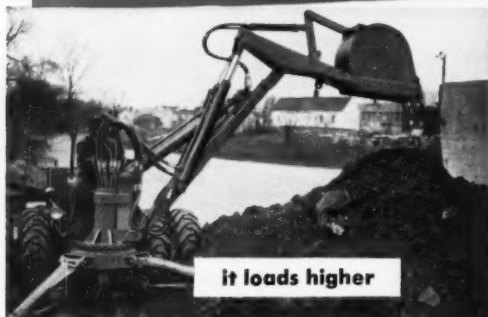
THE CONSTRUCTOR, FEBRUARY 1951

Now... It's even better!

# THE OLIVER-WARE Hydro-Trencher

## It's Smoother Operating...

No hesitation or "jerks" in the smooth application of hydraulic power. You get smoother, easier handling... more positive control with less operator fatigue.



*..and it has a Sensational New "Forced Ejection" Bucket*



By simply reversing the bucket and dipper stick, you get a swing loader that loads out material faster than you'd believe possible. "Forced ejection" bucket is available as optional equipment. Standard trencher bucket and standard swing loader bucket are available at slightly lower cost. With standard loader bucket, loading height is 12 feet. Loading height with "forced ejection" bucket is 12½ feet.

The "forced ejection" bucket gives you quick, clean, complete discharge of even the stickiest materials. Bucket gate is hydraulically controlled and travels the complete length of the bucket to "force" out all material.

For complete information on this all-hydraulic, tractor-mounted trencher and swing loader, see your Oliver Industrial Distributor or mail the coupon.

Have you seen the Oliver color movie, "Task Force on Wheels"? Your Oliver Distributor will be happy to arrange a showing.



## THE OLIVER CORPORATION

Industrial Division: 19300 Euclid Avenue, Cleveland 17, Ohio

A complete line of Industrial Wheel and Crawler Tractors

The OLIVER Corporation Industrial Division  
19300 Euclid Avenue, Cleveland 17, Ohio

Gentlemen: ( ) Send me the facts on the improved Oliver-Ware Hydro-Trencher. ( ) I would like to see the Oliver color film, "TASK FORCE ON WHEELS."

Name.....

Address.....

Company.....

City..... State.....



» DECISIONS on critical problems facing the construction industry will be taking shape at the time when the 32nd annual convention of The Associated General Contractors of America will be in session in Boston from February 26 to March 1.

The business program being developed will bring to Boston many of the principal executives who will be in charge of making the decisions which will have a direct bearing upon the daily operations of general contractors. These executives will discuss the programs under their administration.

#### Questions and Answers

To the fullest extent possible, there will be question and answer periods during which association members and invited guests will be able to ask questions and seek answers on their most perplexing problems, and will be able to give the government administrators concrete examples of conditions which need serious consideration in the decisions to be made.

Among the questions likely to be coming to a head the latter part of the month for early decision might be the following:

Will it be necessary to prohibit the commencement of all types of construction, with minor exceptions, without a permit? And how shall this be administered?

Will it be necessary to have a controlled materials plan which will almost completely allocate the supplies of critical materials under rigid controls? And how would this affect construction projects already under way?

What steps need to be taken for equitable distribution of available new construction equipment among needs of general contractors, the Army, Navy, Atomic Energy Commission, Economic Cooperation Administration, and military assistance to European countries? What provisions should be made for assuring an adequate supply of repair parts?

What adaptations of national wage stabilization policies need to be made for the construction industry? And how should wage stabilization in construction be administered?

What form of price control may be attempted for the construction industry?

What changes in contract forms or administrative procedures may become necessary? And how shall they be administered?

## Convention to Hear Problems Of Day Discussed by Leaders

- Government Executives to Address A.G.C. Conclave
- Critical Questions on Agenda of Boston Meeting
- Massachusetts Chapter Plans Much Entertainment

What policies should be followed by the Federal Civil Defense Administration, and local and state administrations, in allocating funds and awarding contracts for bomb shelters in that \$2.25 billion program?

Since it appears inevitable that heavy pressure will be on Congress to curtail all non-defense items in the federal budget, what steps should be taken to guard against too drastic cuts in essential public works projects?

These are samples of the questions which are likely to be up for decision to which the convention will seek to find the answers.

#### Entertainment Program

The host chapter, The A.G.C. of Massachusetts, is planning an enter-

tainment program in the best traditions of New England hospitality.

On Sunday evening, February 25, there will be a Boston Pops Concert by members of the Boston Symphony Orchestra with Arthur Fiedler conducting.

The following evening there will be a reception followed by a dinner specially prepared of famous New England dishes and served in an appropriate atmosphere. This will be followed by dancing.

#### Concludes with Banquet

A luncheon for the ladies attending the convention will be held Tuesday noon.

The social program will conclude at the annual banquet and dance on Thursday evening, March 1.



#### Convention Committee Plans Entertainment Program

The Convention Committee of The Associated General Contractors of Massachusetts, host for the 32nd annual A.G.C. convention, is planning an outstanding entertainment program.

Members of the committee, in the front row, are, left to right: William

F. White; Moses Slotnik, committee chairman and former chapter president; Charles B. Solomon, chapter president.

In the second row are Stanley D. Porter; M. Murray Weiss; Samuel H. Zitter; and John A. Volpe.

# **A.G.C. Announces Results of Elections**

» **RESULTS** of elections of officers and directors of The Associated General Contractors of America for 1951 were announced last month by Managing Director H. E. Foreman in accordance with the association's procedure.

The new officers and directors are to be installed at the close of the 32nd annual convention in Boston.

New officers, and directors in states where elections were held, are:

## **PRESIDENT (1 year)**

G. W. Maxon  
Maxon Construction Co., Inc.  
Dayton, Ohio

## **VICE PRESIDENT (1 year)**

A. S. Horner  
A. S. Horner Construction Co.  
Denver, Colorado

## **DISTRICT DIRECTORS (3 years)**

### **DISTRICT 1**

*Montana*  
Dan J. Mooney (Building)  
Cahill-Mooney Construction Co.  
Butte

*Washington*  
James W. Cawdrey (Building)  
Cawdrey & Vemo  
Seattle

*Oregon*  
Ray H. Northcutt (Heavy-R.R.)  
Guy F. Atkinson Co.  
Portland  
J. R. Winger (Highway)  
Warren Northwest, Inc.  
Portland

*Alaska*  
R. H. Stock (Heavy-R.R.)  
Stock & Grove, Inc.  
Anchorage

### **DISTRICT 2**

*California*  
J. A. Thompson (Highway)  
J. A. Thompson and Son  
Inglewood

*Nevada*  
E. J. Maupin, Jr. (Highway)  
Dodge Construction, Inc.  
Fallon

### **DISTRICT 3**

*Wyoming*  
Homer A. Scott (Highway)  
Peter Kiewit Sons' Co.  
Sheridan

*New Mexico*  
Charles H. Lembke (Building)  
Lembke Construction Co.  
Albuquerque

### **DISTRICT 4**

*Arkansas*  
Ben M. Hogan (Highway)  
Ben M. Hogan & Co.  
Little Rock

*Oklahoma*  
H. B. Bass (Building)  
D. C. Bass & Sons Construction Co.  
Enid

*Louisiana*  
A. N. Goldberg (Highway)  
A. N. Goldberg, Inc.  
New Orleans

*Texas*  
Herman Brown (Heavy-R.R.)  
Brown & Root, Inc.  
Austin

### **DISTRICT 5**

*Kansas*  
E. O. Johnson (Building)  
Johnson Brothers Construction Co.  
Salina  
E. C. Stewart (Heavy-R.R.)  
Globe Construction Co.  
Wichita

*Missouri*  
Joseph E. Latta (Heavy-R.R.)  
J. E. Latta Construction Co.  
St. Louis  
Robert W. Long (Building)  
Long Construction Co.  
Kansas City

### **DISTRICT 6**

*North Dakota*  
(Tie vote—Selection by Governing Board)

### *South Dakota*

J. L. Materi (Highway)  
Northwestern Engineering Co.  
Rapid City

### *Iowa*

H. L. Hoak (Heavy-R.R.)  
Hoak Construction Co.  
Des Moines  
Rudolph W. Weitz (Building)  
The Weitz Co., Inc.  
Des Moines

### *Minnesota*

C. T. Naugle (Building)  
Naugle-Leck, Inc.  
Minneapolis

### **DISTRICT 7**

#### *Wisconsin*

E. G. Hoeppner (Building)  
Hoeppner-Bartlett Co.  
Eau Claire

#### *Illinois*

Lester C. Rogers (Heavy-R.R.)  
Bates & Rogers Construction Corp.  
Chicago

#### *Indiana*

Wm. H. Junglauss (Building)  
Wm. P. Junglauss Co.  
Indianapolis

### **DISTRICT 8**

#### *Michigan*

Leet M. Denton (Highway)  
Denton Construction Co.  
Detroit

#### *West Virginia*

Ray E. Ritchie (Highway)  
Boso & Ritchie, Inc.  
Ravenswood



Teller Committee canvasses ballots with Managing Director Foreman. Edward P. Coblentz, Baltimore; John A. Volpe, Boston; C. S. Embrey, administrative assistant; Mr. Foreman; and Chairman A. E. Budell, New York.

## DISTRICT 9

*Kentucky*

J. F. Nicoulin (Building)  
Hays & Nicoulin, Inc.  
Louisville

*Tennessee*

Mark K. Wilson, Jr. (Building)  
Mark K. Wilson Co.  
Chattanooga

*Mississippi*

W. G. Wetmore (Building)  
Jackson

## DISTRICT 10

*Georgia*

P. D. Christian, Jr. (Building)  
Christian & Bell Co.  
Atlanta

*Florida*

Frank J. Rooney (Building)  
Frank J. Rooney, Inc.  
Miami

*North Carolina*

George W. Kane (Building)  
Durham  
Nello L. Teer (Highway)  
Nello L. Teer Co.  
Durham

## DISTRICT 11

*District of Columbia*

F. H. Martell (Building)  
F. H. Martell Co., Inc.  
Washington

*Maryland*

John K. Ruff (Building)  
John K. Ruff Co.  
Baltimore

*Delaware*

Frederic G. Krapf (Building)  
Wilmington

*New Jersey*

Ole Hansen (Heavy-R.R.)  
Ole Hansen & Sons, Inc.  
Pleasantville  
William H. Weldon (Highway)  
The Weldon Construction Co.  
Westfield

*Pennsylvania*

S. L. Fuller (Heavy-R.R.)  
John F. Casey Co.  
Pittsburgh

## DISTRICT 12

*Rhode Island*

H. V. Collins (Building)  
Providence

*New Hampshire*

Parker H. Rice (Highway)  
Manchester Sand & Gravel Co.  
Manchester

## Elections of Officers at Chapter Conventions

A number of chapters and branches of The Associated General Contractors of America have elected their 1951 officers at recent annual meetings as follows:

**Florida West Coast Chapter** elected J. C. O'Brien, St. Petersburg, president for 1951 at its annual meeting held in December.

New vice president is J. L. Cone, Tampa; secretary-treasurer is T. Van Eyck, also of Tampa. Judson Edwards continues as the chapter's executive secretary.

Directors elected at the meeting are M. R. Boyce, Clearwater; J. L. Ewell, Lakeland; and J. L. Hennessy and W. H. Mills, St. Petersburg. C. T. Dawkins, Tampa, retiring president, became an ex-officio member of the board.

**The Seattle Chapter**, during its annual meeting held recently, elected Howard Lease president for 1951. He succeeds Cliff Mortensen.



Mr. Lease

First and second vice presidents, respectively, are W. D. Brown and Elmer Edwards. Paul Odegard was elected secretary and P. D. Koon treasurer. E. B. Hickok remains as the chapter's manager.

**The Municipal Contractors Association**, of Dallas, elected F. S. Oldt, Dallas, as president for 1951 at its fifth annual meeting held in December.

A. J. McKenzie, San Antonio, was elected vice president and L. H. Durst, Houston, secretary-treasurer. The chapter's managing director is R. M. Dixon.

Members attending the annual meeting heard J. D. Marshall, assistant managing director of the national A.G.C., outline the impact of current emergency defense measures. He stated that the contracting industry must change as economic conditions changed in order to maintain efficiency.

**The Spokane Chapter** (Washington) re-elected N. A. Degerstrom as president at the chapter's recent an-

nual meeting. George Seebeck was chosen to hold his office as vice president for another year. Lafe Materne was elected for his first term as a vice president. Verne Warren continues in his permanent position as secretary-treasurer.

F. L. McAtee and Charles A. Power were elected directors.

**The Ohio Highway Chapter** elected V. N. Holderman president for 1951 and Richard H. Peirce vice president at its annual meeting held in December. Charles E. McKee continues as executive secretary.

**A.G.C. of New Jersey** elected Angelo Villa, Westfield, as president for 1951.

Other officers elected at the chapter's annual meeting are: 1st vice president, Henry J. R. Dorer, Irvington; 2nd vice president, Jack H. Warner,



Mr. Villa

Montclair; secretary-treasurer, Ole Hansen, Pleasantville. Hugh J. Connelly remains as general manager.

**Eastern Washington Building Chapter** at a recent annual meeting elected new officers and directors.

Vern Johnson, Spokane, was chosen to succeed Henry George as president. Mr. Johnson will be assisted by J. L. Hazen, Spokane, newly elected vice president. W. H. Peacock continues as executive secretary.

New directors are Henry George, Harry Roblee, and Marvin Chierf.

**San Diego Chapter** elected Walter H. Barber, La Mesa, as president for 1951. Chris A. Larsen, San Diego, was elected vice president.

New directors were also elected at the January annual meeting. They are: Robert M. Golden, Earl E. Harris, Doug B. Clarke and retiring President B. O. Larsen. The chapter's manager is M. A. Mathias.

**Associated Building Contractors of Rockford**, Illinois, chose Charles J. Scandrol, Rockford, as president for

1951. Also of Rockford are Ture Bloom, the new vice president. Clara M. Miller continues in the permanent office of secretary-treasurer. Members of the board of directors are: Merrill F. Butler, Harry F. Grip, Hugo Linden, Mr. Scandoli, Mr. Bloom, all of Rockford, and Merrill E. Glass, Belvidere.

**Master Builders' Association**, District of Columbia, has elected the following new officers:

President, William E. Cramer; 1st vice president, B. T. Rome; and 2nd vice president, Joseph Parkhill, Jr. Randall C. Wyant continues as the chapter's secretary.

**Associated Building Contractors of Mississippi** elected new officers and directors as follows:

President, W. I. Schutt; vice president, W. W. Howie; and secretary-treasurer, Charles North, all of Jackson. Junior O'Mara is the chapter's manager.

Members of the executive board are W. G. Wetmore, Frank Thompson, Mr. Schutt and Mr. Howie.

**Memphis Chapter** has elected Seth E. Gien president for 1951. George Wible was re-elected vice president. W. W. MacLaughlin, Jr., is secretary-manager.

**Alabama Branch** and its two sections, Mobile Section and Montgomery Section, elected and re-elected officers for 1951.

Alabama Branch officers are: president, Houston Brice, Jr., Birmingham; 1st vice president, W. J. R. Dunn; 2nd vice president, Paul Hunter; and treasurer, J. Harris Dillard. The executive secretary is J. B. Rawls.

New officers of the Mobile Section are: president, Walter Ernest; vice president, T. H. Davis; secretary-treasurer, Stanley W. Newman. New executive secretary is J. R. Klumpp.

The Montgomery Section's re-elected officers are: president, W. R. Upchurch, and secretary-treasurer, Neil G. Andrews.

**A.G.C. of Jefferson County, Texas**, re-elected its 1950 officers to serve for 1951.

G. Sargl, Beaumont, is president. Vice president is A. L. Hay. Port Arthur. Jack King, Beaumont, is treasurer.



Officers of the A.G.C. of Massachusetts

At its annual meeting held late last year, the A.G.C. of Massachusetts elected new officers. A considerable portion of this meeting was devoted to matters concerning the coming 32nd Annual Convention of the national association for which the Massachusetts Chapter will be host.

Pictured above are the new and retiring officers of the A.G.C. of Massachusetts. Seated from right to left are: Retiring Secretary Stanley D.

Porter, Retiring President Moses Slotnik, President Charles B. Solomon of the George B. H. Macomber Company, Inc., Treasurer Romeo E. Bossi, and Executive Secretary Allan E. Gifford.

Standing from left to right are: Vice President N. B. O'Connell, Board Members Alan J. Potter, Frank M. McGowan, Samuel Suskin, Jack Platt, and Arnold W. Conti, and Secretary Victor K. Kjoss.



Colorado Building Chapter Officers

Above, from left to right, are the 1951 officers of the Colorado Building Chapter, A.G.C. Seated are: W. R. McIlvain, chairman of affiliates; James R. Howell, chapter president; Gerald H. Phipps, vice president; F. P. Spratlan, Jr., chairman of associates; and Nicholas R. Petry, treasurer.

Standing are: William S. Hibberd, secretary-manager; Ray E. Corson, Harold T. Bate, Walter J. Oberg, and Richard H. Cooper, members of the executive committee; Ed Kingman, vice chairman of associates; David A. Olson, secretary; and Harold B. Joy, member of the executive committee.



» MEMBERS of the A.G.C. of Illinois who attended the 44th annual convention of their chapter were asked to advocate publicly the need for modernization of Illinois' highway program and revisions in taxes which provide for road building and repairs.

R. E. Lindsay, editor of Lindsay-Schaub Newspapers, stated in his speech that trucking and bus companies in the state paid far less than those in many other states. He maintained that automobile owners were actually paying a subsidy for common carriers using the roads.

C. M. Hathaway, chief highway engineer of the Illinois Division of Highways, explained that neither poor engineering nor poor construction were the causes of the obvious deterioration of the state's highways. A major portion of the roads were built between 1920 and 1930. These roads are too narrow for today's traffic and too thin to carry loads unforeseen at the time they were built, he asserted.

New officers elected during the December convention are: president, T. E. Fieweger, Davenport, Iowa; vice president, James F. Gallagher, Thornton; and re-elected as treasurer, T. H. Joyce, Jr., Springfield.

Orville Shelato, Danville, and Clay V. Hoskins, Mt. Vernon, were elected directors. Milo P. Flickinger is executive secretary.

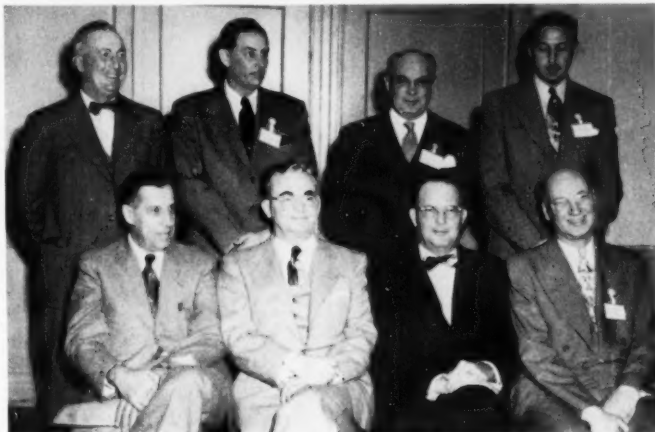
Other convention speakers were J. D. Marshall, assistant managing di-

## Illinois Meeting Points Up Highway Needs

### • 1920-30 Roads Deteriorating; Tax Revision Urged

rector, national A.G.C., Washington; William S. Miller, Ottawa, president of the Illinois Good Roads Association; G. W. Maxon, Dayton, president-

elect of the national A.G.C.; and General D. O. Elliott, Chicago, deputy director of civil defense, state of Illinois.



*Construction Digest*

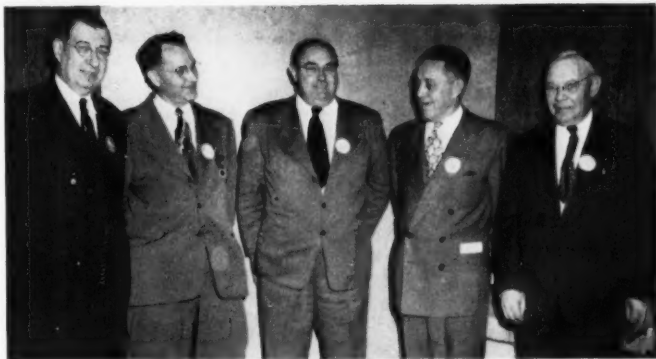
Above are new officers and directors of the A.G.C. of Illinois. Seated, from left to right, are: T. E. Fieweger, president; J. F. Gallagher, vice president; T. H. Joyce, Jr., treasurer; and M. P. Flickinger, executive secretary. Standing, left to right, are Directors Leo Eaton, Clay Hoskins, Orville Shelato and Gene Gunther.

### Merritt-Chapman Change

Directors of Merritt-Chapman & Scott Corporation, A.G.C., have announced the election of Raymond E. Kopp as the firm's president. Mr. Kopp succeeds Rear Admiral Carl H. Cotter who had requested to be relieved of his position as president and a member of the board of directors to be free to devote his efforts to the national defense program. He will act as the firm's consultant.

Mr. Kopp has been with the firm for 29 years and has been its treasurer since 1938. He has been a member of the board of directors since 1940.

Ralph E. DeSimone, at the same time, was elected to serve as vice president and general manager in charge of over-all operations covering the fields of industrial, building, marine, and heavy construction, marine salvage and heavy hoisting. He has been with the firm since 1916.



*Construction Digest*

### Indiana Highway Constructors Elect

The Indiana Highway Constructors, Inc., A.G.C., elected new officers for 1951 during its recent annual meeting.

Ray L. Schutt, Indianapolis, was re-elected president. Mike Ryan, Washington, was elected vice president; and E. B. Johnson, Indianapolis, secretary-treasurer. K. M. Winslow

was elected a director, and Mr. Ryan and Mr. Johnson were re-elected directors. Pictured above from left to right are: H. E. Foreman, managing director of the national A.G.C., Washington, D. C.; Mr. Schutt; Mr. Ryan; William H. Holland, executive secretary; and Mr. Johnson.

## New Hampshire AGC Hears General Merrill



General Frank Merrill, leader of "Merrill's Marauders" of World War II fame, gave the principal address at the annual meeting of the A.G.C. of New Hampshire. General Merrill is now Commissioner of Public Works and Highways for the state of New Hampshire. He discussed affairs relating to China and Korea, and also gave a brief outline of his department's program.

Chapter Secretary John Jacobson, Jr., delivered his annual report which detailed the chapter's activities during its first year. He announced the January opening of a plans room in Concord, stating that through the co-operation of architects, plans and spec-

ifications on all projects in the New Hampshire area would be available in this one location.

Guy MacMillan reported that the first meeting of the A.G.C.-A.I.A. Committee had been most successful and that more meetings would be held throughout the year.

Pictured above are officers and directors of the chapter. Seated, left to right, are: President Robert A. Foster, and Vice President Frank Whitcomb. Standing, left to right, are: Director Leon Keyser, Secretary John Jacobson, Jr., Director Kenneth Curran, Treasurer E. David Swett, and Executive Secretary Rowland Oakes.

## Master Builders of Iowa Elect Younglove

The 39th annual convention of the Master Builders of Iowa, A.G.C., was attended by a large number of the chapter's members and other construction industry representatives including architects, engineers, sub-contractors, public officials, labor union representatives, equipment and material suppliers and others.

During the recent two-day session, new officers for 1951 were elected. Clyde C. Younglove, W. A. Klinger Company, Sioux City, was chosen to succeed T. R. Lovejoy as president.

John Ringland, Des Moines, was elected vice president and C. Glenn Walker, Fort Dodge, was elected secretary. Frederick W. Mast was re-elected treasurer. W. W. Moeller con-

tinues as the chapter's executive secretary.

New directors are: Gordon F. Wickes, Des Moines; Paul McCorkle, Sac City; and Clarence W. Smith, Fort Madison.

In describing the functions of the General Services Administration, W. A. Halloway, regional director, Kansas City, Missouri, stated that there is a large backlog of necessary construction of federal buildings. The erection of post offices and similar buildings has been slighted during the last decade, he said.

Other speakers included national A.G.C. Staff Members James D. Marshall, assistant managing director, and Welton A. Snow, manager of the Building Contractors' Division.

## Obituary

**George A. Creed**, senior member of the firm of Geo. A. Creed & Son, Carolinas Branch, A.G.C., died December 20. Mr. Creed was a resident of Camden, South Carolina, and maintained offices in that city and in Columbia, South Carolina. He is survived by his wife, Mrs. Mattie Smyrl Creed of Camden, and two sons, Dr. Otis Creed and Alvin Creed. The latter is a member of the Creed firm.

**Edward Weber** died of a heart ailment on December 9. He was general superintendent and a director of C. R. Meyer & Sons Company, Oshkosh, Wisconsin. Mr. Weber had been associated with the Meyer Company, members of the Wisconsin Chapter, A.G.C., for 37 years. He is survived by two daughters.

**Langley S. Homer**, a member of the Turner Construction Company, A.G.C., passed away December 12. Mr. Homer was also a member of the board of directors and chairman of the labor committee of the Philadelphia Chapter, A.G.C. Burial was at Cambridge, Massachusetts.

**J. Harlan Williams**, president of J. H. Williams & Company, was drowned while duck hunting in Chesapeake Bay January 4. Mr. Williams had long been active in the Baltimore (Maryland) Builders Chapter, A.G.C., and had been nominated for the office of vice president for 1951. He is survived by his wife and two children. He was 53 years old.

**James J. Wishart, Jr.**, past president of the Florida West Coast Chapter, A.G.C., and president of Wellswood, Inc., died at his home in Tampa, December 2. Mr. Wishart's construction activities consisted primarily of suburban development. He was also active in the legal profession and civic affairs.

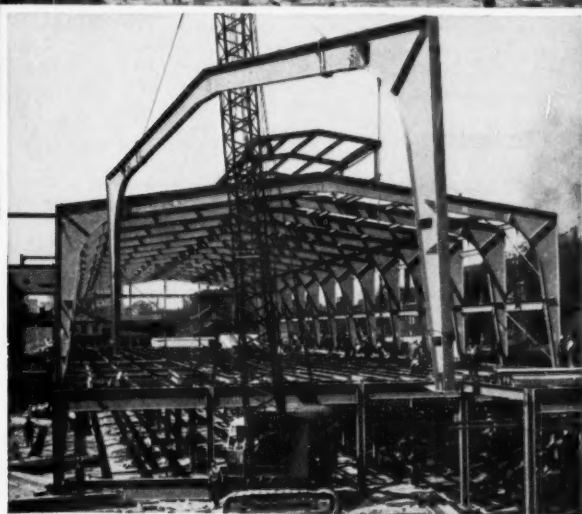
**S. F. Ditmars**, president of Ditmars-Dickmann-Pickens Construction Company, died January 7. The firm maintains offices in Little Rock, Arkansas, and Muskogee, Oklahoma, and is a member of both the Arkansas Chapter and the Oklahoma Builders Chapter, A.G.C. He is survived by his widow, Jewel, and a daughter, Mrs. Jane Kerr. He was very active in A.G.C. work.

# RIGID-FRAME STEEL CONSTRUCTION

Gives more usable floor space! • Saves erection time and costs!



Field House-Auditorium for St. Joseph's College, Philadelphia. John McShain, Inc., General Contractor; Emile G. Perrot, Architect; Charles H. Wolf, Consulting Engineer.



Bottling plant and case warehouse, Detroit, Michigan, for The Stroh Brewery Company. Harley, Ellington and Day, Inc., Architects and Engineers.

THESE two buildings, fabricated and erected by American Bridge Company, serve to illustrate some of the advantages of rigid-frame steel construction. The unobstructed floor area, the speed of erection, neat appearance, and economy which this type of construction provides may save money for you. For information on all types of construction, consult our nearest Contracting Office.

## AMERICAN BRIDGE COMPANY

General Offices: Frick Building, Pittsburgh, Pa.

Contracting Offices in: AMBRIDGE • BALTIMORE • BOSTON • CHICAGO • CINCINNATI • CLEVELAND • DENVER • DETROIT • DULUTH • ELMHURST  
GARY • MINNEAPOLIS • NEW YORK • PHILADELPHIA • PITTSBURGH • PORTLAND, ORE. • ST. LOUIS • SAN FRANCISCO • TRENTON  
UNITED STATES STEEL EXPORT COMPANY, NEW YORK



# AMERICAN BRIDGE

UNITED STATES STEEL

## Maxon Honored by Mutuals of Wausau

### • Plaque Awarded for Record in 4.6 Million Man Hours' Work

» A RECORD of 4,633,061 man hours of work with a frequency rate of 4.32 and severity rate of 1.6 from February 1949 until August 1950 won a plaque for the Maxon Construction Company, Inc., A.G.C., of Dayton, Ohio, on its mammoth project for the Atomic Energy Commission at Oak Ridge, Tennessee. The national average in construction is approximately 11.38 for frequency and 2.6 for severity.

The Employers Mutual Liability Insurance Company (Employers Mutuals of Wausau) presented the handsome plaque to management and employees "in recognition of their contribution toward the conservation of life, health, and happiness."

Certificates of merit were awarded all employees at the presentation dinner, and similar plaques were presented to Maxon's subcontractors, Kaighen & Hughes, and Edenfield Electric.

James A. Pigue, safety engineer for the insurance company, acted as master of ceremonies and presented the plaques to C. A. Budnik, J. J. Paulin, and V. A. Cronk, contractor repre-

sentatives, who made short speeches of acceptance.

Representing the Atomic Energy Commission, R. H. McCulloh, chief of production plant, construction division, complimented the supervision of the project on the excellent record.

Others attending the meeting were R. E. Dvorak, branch sales manager, George P. Raese, supervising engineer, J. K. Ainsworth, branch claims manager, and Walter Taylor, resident adjuster, of the Employers Mutual Liability Insurance Company; N. H. Marsden, AEC safety engineer; and the project managers and their deputies, department heads and superintendents, and safety department employees of the contractors.

The Maxon Company plans to pass the plaque around to the various departments each week on the basis of which shows the best safety record.

The firm has always ranked high in accident prevention achievement, having won only last year an award from The Associated General Contractors of America for having the best 10-year record among firms in the association's contests.

## 311 Finish in A.G.C. 1950 Safety Contest

### • 95 Million Man Hours Reported; Convention Awards Stated

» THE RECORDS of all contestants in the A.G.C. Accident Prevention Contests have been compiled, their frequency and severity rates computed and sent to the judges who will pick the winners. The winners will be determined this month.

For the contest year which ended September 30, 1950, the number of contestants who persevered through to the end was 311, which is 69% greater than in 1949 and by far the largest number ever to finish in the national contests.

In addition to picking the winners in the contest for the past year the judges will take action in regard to two other groups, the Best Five Year Record 1945-1950, and the Best Ten Year Record 1940-1950.

Awards will be presented at the A.G.C. convention which opens in Boston February 26.

The 311 contestants in the 1950

contest reported a total of 95,252,896 man hours' exposure, with 3,855 lost time accidents, resulting in 300,475 days' lost time. On the above basis the overall frequency rate was 40.4 and the severity rate 3.15.

In the Best Five Year Record Contest, 25 firms were represented, reporting 76,157,308 man hours with an overall frequency of 37.55 and severity 1.907.

In the Best Ten Year Record Contest, 14 firms were represented, reporting 159,524,624 man hours with a frequency of 37.30 and severity of 3.580.

At the A.G.C. convention awards will also be made to A.G.C. chapters with the highest percentage of members finishing in the 1950 contest. There will also be an award to the A.G.C. chapter manager judged to have the best accident prevention program activity.

## Kirk Heads Safety Group

Harry J. Kirk, research and safety advisor on the national staff of the A.G.C., has been elected chairman of the Construction Section of the National Safety Council.

William E. Woodruff, managing editor of THE CONSTRUCTOR, continues as a member of the publicity committee of the Construction Section.

Other committee members who are connected with the association are:

Membership committee—Ray Hahn, Allegheny Asphalt & Paving Company, Inc., Pittsburgh; George Combs, administrative assistant, Detroit Chapter; S. D. Webb, Dravo Corporation, Pittsburgh; H. S. Benton, Warren S. Bellows Construction Corporation, Houston; R. J. Hendershott, manager, A.G.C. of Minnesota, Minneapolis; and Dwight W. Winkelman, A.G.C. past president, Syracuse, New York.

Program committee—C. M. Cahill, Massman Construction Company, Kansas City, Missouri; George A. Benish, manager, Milwaukee Chapter, Milwaukee; C. H. Black, Stone & Webster Engineering Corporation, Boston; Lee Deardorf, W. L. Johnson Construction Company, Hicksville, Ohio; Jerome J. Williams, Morrison-Knudsen Company, Boise, Idaho; and N. B. O'Connell, Turner Construction Company, Boston.

Advisory committee—Gerard O. Griffin, Dravo Corporation, Pittsburgh.

## Booklet on Circular Saws

An accident prevention booklet, "Woodworking Circular Saws," has been published by the National Association of Mutual Casualty Companies.

Written in the language of the shop man, the publication is designed to give him a clear understanding of the basic causes of saw accidents, and to enable him to devise practical methods of safeguarding operations under any given conditions. Operating principles are described.

The booklet is one of a series of technical reports prepared under direction of the association's engineering committee. Other reports on accident prevention subjects on which there is a lack of fundamental information are in process, according to Floyd E. Frazier, industrial safety consultant of the Accident and Fire Prevention Division, 919 North Michigan Avenue, Chicago 11, Illinois.





## Luck? What do you mean, luck?

### Employers Mutual—not luck —cheated Old Man River of this doomed victim

Night on a cofferdam construction job . . . a sudden slip . . . his foothold lost, a worker is plunged into the river's dark waters.

A rescue tug rushes out, its searchlight scans the waters . . . there, 500 yards distant, safe and floating, is the worker—his life saved—his family kept intact because he wore the life vest prescribed for him and his fellow workers by Employers Mutual.

\* \* \*

In countless such cases is tragedy averted . . . lives saved . . . accidents forestalled . . . occupational disease reduced, *not* by luck, but as the direct

result of skilled and careful planning by Employers Mutuals service groups. Everyone benefits—workers and their families, as well as employers, whose gain is reflected not only in higher production but in premium savings.

Employers Mutuals services to policyholders represent the highest standards in the fulfillment of contractual obligations. Cooperation of company-trained engineers, nurses, hygienists and claim adjusters is a powerful force in building safer business operations and more friendly employee relations. And—it opens the door to an entirely new conception of the benefits of insurance service.

Employers Mutuals write: Workmen's Compensation—Public Liability—Automobile—Group Health and Acci-

dent—Burglary—Plate Glass—Fidelity Bonds—and other casualty insurance. Fire—Extended Coverage—Inland Marine—and allied lines. All policies are nonassessable.

What does *your* fire insurance cover? Would an explosion, for instance, find your property unprotected? Send for our new booklet on "Fire Insurance." It will help you to understand what protection you now have and to check it against your requirements. Do you have our "Dictionary of Insurance Terms?" It is invaluable in helping to clarify the provisions of your fire and casualty insurance policies. Send for these informative booklets on your letterhead—or call your local Employers Mutuals representative.



**Employers Mutuals Policies Protect Lives, Health and Property**



... make  
insurance  
understandable

## EMPLOYERS MUTUALS OF WAUSAU

EMPLOYERS MUTUAL LIABILITY INSURANCE COMPANY OF WISCONSIN

EMPLOYERS MUTUAL FIRE INSURANCE COMPANY

HOME OFFICE: WAUSAU, WISCONSIN

Offices in Principal Cities—Consult Your Telephone Directory

# STANDARD FORMS

COVERING IMPORTANT CONTRACTING PROCEDURE



Prepared by The Associated General Contractors of America and Cooperating Bodies

Order No.	MANUALS	Per Copy	Per Dozen	Per 100
1.	A.G.C. Manual (Contains documents listed below: Nos. 3-30, inclusive, and Nos. 34, 35, 36, 36a, 37, 38)	\$5.00	\$50.00	-----
2.	Accident Prevention Manual (Revised and enlarged 1949)	3.00	30.00	\$210.00
<b>CONTRACTS</b>				
3.	Standard Contract for Engineering Construction issued by the Joint Conference on Standard Construction Contracts	.25	2.75	20.00
4.	Standard Building Contract of the American Institute of Architects—Revised 5th Edition	.50	-----	47.50
5.	Subcontract form—American Institute of Architects—Revised 5th Edition	.10	-----	9.50
7.	Standard Government Contract and Instructions to Bidders	.10	.50	4.00
8.	A.G.C. Cost Plus a Fee Contract	.10	.50	2.50
9.	A.I.A. Cost Plus a Fee Agreement between Contractor and Owner	.10	-----	-----
11.	Equipment Rental Agreement	.10	.50	3.00
12.	A.G.C. Proposal Form	.10	.50	3.00

## ESTIMATING AND ACCOUNTING

16.	Building Estimate Summary	.10	.50	3.00
17.	Job Overhead Summary	.10	.50	3.00
20.	Contractors' Equipment Ownership Expense (Itemized tables of ownership expense elements with instructions for application. Revised 1949)	1.00	10.00	65.00
21.	Equipment Record—Bond paper	.10	.50	3.00
22.	Equipment Record—Cardboard	.10	.50	3.50

## INVESTIGATION OF BIDDERS

24.	Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover Engineering Construction (For Qualifying Before Bidding)	.20	1.80	12.00
25.	Standard Pre-Qualification Questionnaires and Financial Statements for Prospective Bidders—Complete in Cover Building Construction (For Qualifying Before Bidding)	.20	1.80	12.00

Order No.	INVESTIGATION OF BIDDERS (Continued)	Per Copy	Per Dozen	Per 100
26.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Engineering Construction (For Qualifying After Bidding)	.20	\$1.80	\$12.00
27.	Standard Questionnaires and Financial Statement for Bidders—Complete in Cover. Building Construction (For Qualifying After Bidding)	.20	1.80	12.00
28.	Financial Statement and Questionnaire for Credit Transactions	.20	1.80	12.00

## MISCELLANEOUS

29.	Insurance Check List	.10	1.00	5.00
30.	The Functions of a General Contractor	.10	.75	6.00
34.	A.G.C. Governing Provisions	.10	.50	3.00
35.	A.G.C. Code of Ethical Conduct	.10	.50	3.00
36.	Concrete Mixer Standards	-----	-----	-----
36a.	Contractors' Pump Standards	-----	-----	-----
37.	A.I.A. Standard Form of Arbitration Procedure	-----	-----	-----
38.	Suggested Guide to Bidding Procedure	-----	-----	-----

## FOR A.G.C. MEMBERS ONLY

### A.G.C. EMBLEM

List of Styles and Prices on request.

### SIGNS AND SEALS

40.	A.G.C. Metal Seal (red and black) 10" dia.	.40
41.	A.G.C. Decalcomania Seal (red and black)	-----
a.	10" dia.	.20
b.	5" dia.	.10

Metal Seals and Decals: 20% discount for orders of more than 50; 40% discount for orders of 200 or more.

### 43. A.G.C. SOCIAL SECURITY FORMS

Form SS1: Application for Employment;  
Form SS2: Employees' History Record;  
Form SS3: Employees' Employment and Earnings; Form SS4: Payroll. List of prices and styles will be furnished to A.G.C. members on request.

USE THE CONVENIENT COUPON TO PLACE YOUR ORDER

Order No.	Amount	Cost	11. _____	27. _____	40. _____
1.	_____	_____	12. _____	28. _____	41a. _____
2.	_____	_____	16. _____	29. _____	41b. _____
3.	_____	_____	17. _____	30. _____	43. Price List and Samples <input type="checkbox"/>
4.	_____	_____	20. _____	34. _____	Price List and Styles of Emblem <input type="checkbox"/>
5.	_____	_____	21. _____	35. _____	
6.	_____	_____	22. _____	36. _____	
7.	_____	_____	24. _____	36a. _____	
8.	_____	_____	25. _____	37. _____	
9.	_____	_____	26. _____	38. _____	
			TOTAL COST _____		

Make Checks payable to CONSTRUCTION FOUNDATION, A.G.C., Munsey Building, Washington 4, D. C.

Gentlemen: Enclosed find check for \$\_\_\_\_\_ for which please send materials as ordered by number herewith.

Name \_\_\_\_\_ Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Feb. 1951

## Construction Standards Conference Topic

### • Turner Executive Evaluates Criteria for Contractors

»VALUE of standards in modern construction was the theme of the National Standardization Conference held in the Waldorf-Astoria Hotel, New York City, November 27-29. The session, which presented the benefits of standards as seen by the contractor, the architect and the material producer, was held in conjunction with the 32nd annual meeting of the American Standards Association, and was sponsored by the Producers Council, The American Institute of Architects and The Associated General Contractors of America. Norman P. Mason, of the U. S. Chamber of Commerce, presided.

#### New York Code Action

Standards, to be effective, must be applied, asserted E. K. Abberley, project executive and director, Turner Construction Company, A.G.C., New York. Standards form a sound foundation or base from which to advance, "but we must not let them thwart or dull the edge of creative and pioneering effort if we are to move ahead," he warned.

With reference to building codes, Mr. Abberley said, "During the past

few years many men and organizations have worked hard to improve the building code situation. It is a serious one and steps should be taken to take advantage of all that has been done to try and release the industry from the burden of antiquated, conflicting code requirements." He saw early relief only from action at the state level as has been undertaken by the state of New York.

Holding that standardization plays an important part in the selection of and payment for tools, plant and equipment required in construction, he quoted from the 1950 Mid-Year Report of the A.G.C. on what had been done to standardize equipment and its use. The speaker also quoted from reports of what the joint cooperative committees of the A.G.C. with the A.I.A. and American Society of Civil Engineers were doing in their studies of contract forms, bidding procedure, specifications and administrative procedures.

Harry C. Plummer, director of engineering and technology of the Structural Clay Products Institute, speaking for the material producer, noted that construction methods had developed over a long period of time and that change, therefore, was slow.

#### Buildings More Complicated

"Following World War I, construction of buildings became more complicated than it had ever been before," he declared. "Architects were called upon the deal with a wide variety of new products, including thermal insulation, acoustical materials, air conditioning equipment and many new types of wall and floor finishes. . . . he (the architect) was forced to rely to an increasing extent upon the recommendations of material manufacturers for the application of their products.

"As a result, some serious failures developed which reflected against the building products . . . and building material producers soon realized that to protect the reputation of their products, it was necessary to develop sound application standards which could be recommended to the designing professions."

Lessing W. Williams of New York, in taking up the architect's view of standardization, dwelt on the benefits of standards in securing for the owner the exact type of structure he sought.

## Michigan Group Discusses Prequalification

The advantages of prequalification of general contractors was stressed recently by Walter L. Couse, president of The Associated General Contractors of America, at a meeting of the Michigan Municipal League.

Public officials required by the law of their states to advertise for bids and accept all comers are very often compelled to accept the low bid of a contractor who is not qualified to do the work, Mr. Couse pointed out. Frequently the unqualified bidder injures himself by bidding too low, and unless he can cancel his contract, he may be ruined.

#### Warns About Politics

Prequalification of bidders is the obvious means of preventing such injury to the inexperienced contractor and of assuring the public and its representatives that government projects will be of a high quality, Mr. Couse said. However, prequalification must not fall prey to politics, he warned, adding that one way to achieve this is to be sure that the qualifying body be no lower than the county level. He recommended that

this body include a general contractor, a registered architect, a registered engineer and a certified public accountant as the primary members.

Mr. Couse assured his listeners that the A.G.C. members of Michigan would assist them in preparing a bill to submit to the state legislature. So far, he said, 31 states have prequalification for their highway work and five states require it for building work. The courts have definitely established the legality of prequalification.

#### Single Contract Method

Mr. Couse also touched on the advantages of the single contract method of construction. His main point was that the general contractor who is responsible for the whole job actually takes the bulk of worrisome details and responsibility off the shoulders of public officials who would otherwise have to assume the duty of being the central coordinator.

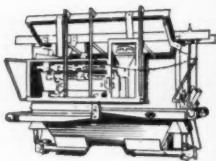
In conclusion, he stated that the A.G.C. and its member firms were always ready to promote any law or program which would help to improve the construction industry.

#### ECPD Aid to Engineering

A review of the Engineer's Council for Professional Development during the past year has just been released in the council's annual report for 1950. This organization, which is supported by various engineering societies, seeks to coordinate and promote higher professional standards of education and practice, and greater solidarity in the engineering profession.

Since the council was organized in 1935, its committee on engineering schools has examined and accredited 636 engineering curricula in 142 engineering schools. More than 50 courses were accredited in the past year.

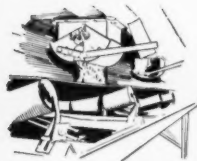
Work of the council is carried on by 350 practicing engineers and educators. Headquarters are at 29-33 West 39th Street, New York City 17, N. Y.



#### WEIGHING BATCHERS

New standards of accuracy and efficiency from a roadbuilders batcher to completely automatic, recording weighing batchers for high production ready mixed concrete operations.

## TO GET THINGS DONE IN '51— SEE BUTLER BIN



#### BUTLER BIN GATES

Bin gates are subject to heavy wear. Keep extras on hand to avoid shutdown. BUTLER makes them in rotary, clamshell, roller and radial types.



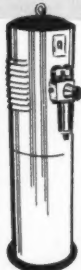
#### CENTRAL MIXING PLANTS

BUTLER PLANTS are widely recognized as examples of brilliant engineering in a great variety of materials handling problems. Here the experience of the BUTLER Engineer is invaluable.



#### AGGREGATE PLANTS

Highly portable, quickly erected, BUTLER Aggregate Plants save time and money in meeting high pressure paving schedules.



#### CEMENT AERATOR

Compressor, engine, pump and complete controls all in one compact, space-saving unit. The BUTLER CEMENT AERATOR is essential to a smooth flow of cement.

1951 will be a year of action and unprecedented production. The highway program is expanding at an accelerated pace. Demand for Ready Mixed Concrete is climbing week by week for building construction is still far behind the nation's requirement.

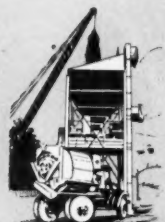
Production schedules such as these mean modern equipment—and modern equipment means BUTLER and BUTLER Engineered Design.

In your plans for new plants—or for modernizing existing equipment "to get things done in '51" it's the soundest of common-sense to consult the BUTLER engineer.

### BUTLER BIN CO.

953 BLACKSTONE AVE.

WAUKESHA, WISCONSIN



#### READY MIXED PLANTS

Ready Mixed Concrete Plants for every production level—engineered by BUTLER for the highest efficiency and lowest cost operation.



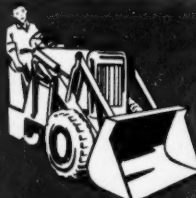
#### BULK CEMENT PLANTS

A wide range of capacities for every roadbuilding job. Faster batching, spill-pound accuracy. Shown is the CR-37-58 providing 650 bbls. capacity.



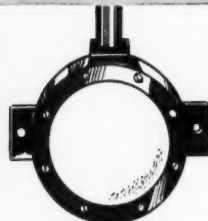
#### CONCRETE PRODUCTS PLANTS

BUTLER engineers have an international reputation for highly efficient design in Concrete Products Plants. BUTLER offers an engineering service that assures a maximum profit.



#### THE NEW BUTLER '102' SCOOP

Faster forward travel (11 miles an hour), a turning radius of only 6'3", the new BUTLER '102' is tops in maneuverability and efficiency.

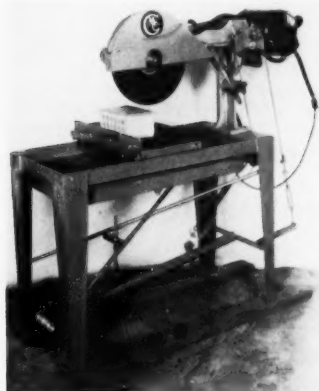


#### BIN LEVEL INDICATOR

A new BUTLER development, a truly trouble-free, positive, accurate Bin-level Indicator. Works successfully with a great variety of materials.



**Masonry Saw**—Construction Machinery Sales Co., Waterloo, Iowa. Design of new saw unitizes cutting head, arm and motor so as to permit align-

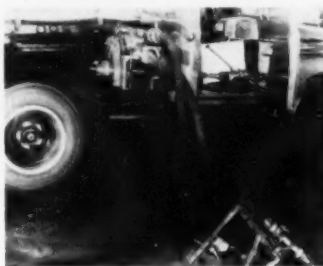


Construction Machinery Co.'s masonry saw

ment adjustments off rigid column, mounted directly to jig-welded steel frame. Saw will cut wet or dry. For wet cutting, it has independent centrifugal pumping unit with own power to circulate coolant liquid. Impeller and case of pumping unit are made of wear-resistant rubber. Saw has foot feed, indexed adjustment for cutting height control, locking arrangement for plunge cutting and scoring, V-shaped ball bearing equipped material feed cart. Both cutting arm and column are constructed of cast aluminum.

**Power Take-Off**—Mobile Power, Inc., 700 E. Kalamazoo St., Lansing, Mich. Tansen top-mounted full-torque power take-off is designed to operate from vehicle engine. It is installed as integral part of transmission. Transmission cover is removed, gear-shifting parts are placed in power take-off housing and housing mounted in place of transmission cover. Its speed is in direct relation to crankshaft speed regardless of gear

ratio being used in transmission. Power take-off is capable of delivering 98% of engine power, manufacturer claims.



Tansen top-mount power take-off

**Bolt Cutter**—Manco Mfg., Co., Bradley, Ill. New 15" bolt cutter is recommended for cutting No. 9 form wire, cutting strapping and case-hardened sheet metal screws. It requires no adjustments. Jaws are of tool steel and handles of 14-gage steel stock.

## BIGGER PAYLOADS with **WELLMAN** Williams Type BUCKETS

• Exclusive features in design and construction make payloads bigger...at lower cost! Weight is balanced, not cumbersome. Extra strength is built into every part with the sturdy welded rolled steel construction pioneered by Wellman, the leader for over fifty years. A type for every service!

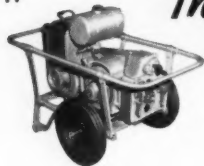
**THE WELLMAN ENGINEERING COMPANY**  
7015 CENTRAL AVENUE • CLEVELAND 4, OHIO

SEND FOR  
BULLETIN



**for**  
**MUNICIPAL  
 PAVING  
 HIGHWAY  
 WIDENING  
 and PATCHING  
 BRIDGE DECKS  
 SPILLWAYS  
 and  
 MANY OTHER JOBS**

1.



2.



3.



4.



6.



## **The JACKSON** **ELECTRIC, VIBRATORY SCREED is FAR FASTER-BETTER!**

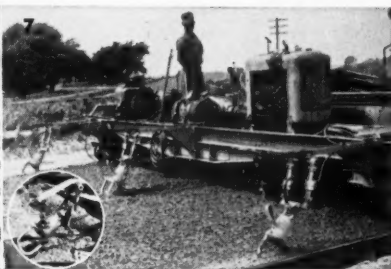
It strikes off to any crown, undercuts at curb or sideform, works right up to and around manholes and other obstructions. With it center construction joints may be eliminated and full widths (up to 30') poured. Requires only two men on widest slab, due to strong tendency to propel itself. It's the only screed that can be rolled back on 4 rollers for second pass. Contractor has only to secure plank cut to proper length and crown to be set for any job. Powered by Jackson 1.25 KVA Portable Power Plant.

## **IDEAL VIBRATORS FOR EVERY TYPE OF JOB**

1. Power Plant used with Screed, 1.25 KVA. Others of 2.5 and 5 KVA capacity—all produce both single and 3-phase 110 V., 60 C. AC and have generators requiring no maintenance or adjustment. 2. Hydraulic vibrator with time-saving 50' reach. 3. Powerful, easy to handle electric vibrator—shafts up to 28". 4. Finest of engine-driven flexible-shaft vibrators. 5. Revolutionary, fast, granular soil vibratory compactor. 6. Heavy-duty mass construction vibrator—a "must" on dams, etc. 7. Sideform vibrator, mounts on finisher, saves better part of 2 men's labor. Write for "Pocket Guide" describing the entire line.

FOR RENT OR SALE AT JACKSON DISTRIBUTORS

**ELECTRIC TAMPER & EQUIPMENT CO.  
 LUDINGTON MICHIGAN**



## **NEW EQUIPMENT • MATERIALS**

**Trucks**—G.M.C. Truck and Coach Division, Pontiac 11, Mich. Light truck 1951 models range from 100-22 model series in half-ton class through 2-ton and 350-24 truck-tractor. Extra horsepower has been added to 228 and 248 cu. in. engines used in these trucks. Front and rear axles on models from 280 up have been strengthened and brake design has been changed to provide better performance and longer wear. Cab improvements include controlled ventilation windows and seat cushion adjustment.



1951 G.M.C. stake body truck

**Electric Plants**—Winpower Manufacturing Co., Newton, Iowa. "G-line" electric plants are offered in 300, 600 and 1,000 watt capacities with Briggs and Stratton engines and in 1,500, 3,000, 5,000 and 10,000 watt sizes powered by Wisconsin engines. Various models are available in each size, in A.C. or D.C., with complete range of voltages, cycles, phases and with manual or remote electric starting.

## **Plastic Cab Roof**



New models of the diesel-electric cranes made by American Hoist and Derrick Co. are equipped with a dome section of green Plexiglas in the front quarter of the cab roof. The transparent plastic provides full visibility upward as well as to front and sides while shielding the operator from sun glare. The dome has excellent resistance to breakage.

## NEW EQUIPMENT • MATERIALS

**Truck Mixer**—Blaw-Knox Division, Pittsburgh 22. New "Hi-Boy Truk-mixer" features reduction in weight from previous models, with 3 cu. yd. model a ton lighter and  $4\frac{1}{2}$  cu. yd.  $\frac{1}{2}$ -ton lighter. This has been accomplished by new 3-way, non-by-passing piston-type water valve that makes possible simplified piping system; new double-strand roller chain drive which automatically compensates for misalignment between drum and drive shaft caused by operation over rough roads; new compact and simplified transmission of modern automotive design. Design of revolving hopper for charging and discharging has not been changed.



Blaw-Knox "Hi-Boy Truk-mixer"

**Concrete Bucket**—Gar-Bro Manufacturing Co., 2416 E. 16th St., Los Angeles. High-pressure air supply tank and control valves are integral part of equipment on Model A air-operated concrete bucket. Pull-chain-controlled valves eliminate necessity of hose, connectors and air supply at dumping location. Double clamshell gates are grout-tight and non-clogging. They are air-operated, have center discharge and dump straight down. They can be operated by remote control. All sizes of Model A buckets, including dual-4, 2-compartment buckets, can be equipped with high-pressure air tanks and controls. Chutes and hoppers are made to fit new buckets.

**Plaster-Mortar Mixer**—Muller Machinery Co., Metuchen, N. J. "Utility Type" 6 cu. ft. mixer has low charging height and is equipped with bag splitter and safety grate. Standard power equipment is Briggs and Stratton air-cooled engine which drives through roller chain and machine-cut gears. Drive is furnished either with or without clutch. Wheels are disc-type equipped with 4.00 x 12 pneumatic tires and roller bearings.



## Dual-Action + Roto-Set Shield MAKES BIG HIT WITH *Ramset* USERS

Try the RAMSET DUAL-ACTION TOOL, with ROTO-SET SAFETY SHIELD, on your next job of fastening into steel or concrete. Then you'll see why users are enthusiastic about this latest combination for fast, easy, low-cost fastening.

In ten seconds, you can adjust the ROTO-SET SHIELD to set a RAMSET FASTENER just where you want it, with almost hair-splitting accuracy. Close to a predetermined line—or up to  $2\frac{1}{4}$ " away—just set for the required distance and every fastener goes in at exactly the right place. No guesswork with ROTO-SET! Easy, simple, accurate!

With sturdy, dependable tools, plus widest range of fasteners, plus scientifically graded power charges to control penetration, *Ramset* continues to set the pace for powder-actuated fastening. Every day, thousands of contented users are saving time and money with RAMSET FASTENING SYSTEM.

### See DUAL-ACTION in ACTION!

Ask your RAMSET Specialists for a 15-minute demonstration of RAMSET SYSTEM, and see how it will do your fastening work easier, faster and at lower cost. No obligation, of course. Or, write us for details. *Ramset Fasteners, Inc.*, 12117 Berea Road, Cleveland 11, Ohio.



TAP IT . . .  
or TURN IT



*Ramset Fastening System*  
Pioneer in powder-actuated fastening



## SLOANE QUANTITY SURVEYS

For  
**All Classes of Construction**

**We Maintain a Large Staff  
of Engineers Which Assures  
Speed—Accuracy—Full Detail  
Reasonable Prefixed  
Charges**

Approved by  
Associated General Contractors of  
America and Federal, State and  
Municipal Authorities

Your Inquiry Will Receive Prompt  
Attention and Sample Estimates

**H. A. Sloane Associates**

Established 1922

415 Lexington Avenue  
New York 17, N. Y.

SURVEYS

VALUATIONS

APPRAISALS

**REDUCE CONCRETE  
LABOR COSTS  
UP TO 60%**

with the  
**WORLD'S FOREMOST  
"SHAKE-DOWN ARTIST"**



The one-man Vibro-Plus Roll-gear Internal Vibrator will help you roll back rising labor costs and do a better job.

Available in electric, gas-engine or pneumatic-driven models delivering from 11,000 to 15,000 V.P.M. Exclusive patented features assure years of trouble-free operation.

Write for complete details and name of nearest distributor.

**VIBRO-PLUS**  
PRODUCTS, INC.

54-11 Queens Blvd., Woodside, L. I.

## NEW EQUIPMENT • MATERIALS

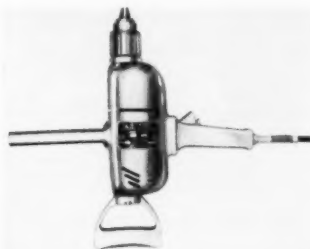
**Earth Auger**—Caterpillar Tractor Co., Peoria 8, Ill. Trackson Model EA4 earth auger is now available with Caterpillar D4 60"-gauge tractor. Model EA4 will drill holes 9" to 24" in diameter to depth of 8' with standard 13' bar or to depth of 11' with optional 16' bar. Solid auger bar is square. It has 5,000-lb. capacity which handles poles up to 50' in length.



Trackson EA4 earth auger mounted on Caterpillar D4 tractor

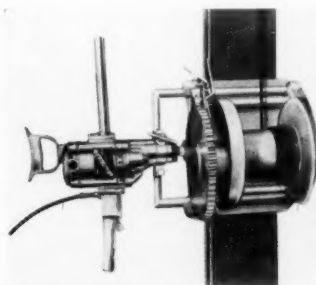
**Stainless Steel Nails**—Elastic Stop Nut Corp., 2330 Fauxhall Rd., Union, N. J. Self-clinching "ES-nail," for face-nailing asbestos shingles directly to non-wood sheathing, features increased holding power and penetration at stud locations. Nail is now available for 1/2" sheathings and nail for 25/32" non-wood sheathing is planned for spring. New feature, designed to eliminate danger of loose shingle corners at nailing points where sheathing is backed by studs or wood members, is rectangular opening let into driving leg. When driving leg penetrates stud, bellows-like expansion of sides of nail into sheathing material takes place. Locking foot of nail has been lengthened and widened to increase holding power. Locking mechanism has been re-designed to provide tight clinch regardless of thickness variations. Head of nail has been relieved so that it requires approximately 25% less force to flatten it against face of shingle.

**Drills**—Skilsaw, Inc., 5033 Elston Ave., Chicago 30. Four electric drills, Models 283, 2101, 2103, 2121, range in capacity from 1/2" to 3/4" in steel and up to 1 1/2" in hardwood. Drills feature lightness, compactness and balance. Model 283 (1/2") weighs 13 lbs. and measures 15" in length. Model 2101 (3/8") weighs 14 1/4 lbs. and is 15 3/4" long. Models 2103 and 2121 are high-torque, low-speed models. Model 2103 has 5/8" capacity in steel, 1 1/2" in hardwood, is 16 1/8" long and weighs 14 1/4 lbs. Model 2121 has 3/4" capacity in steel, 1 1/2" in hardwood. It weighs 15 lbs. is 16 1/8" long. All models have die-cast aluminum alloy housing, over-size ball bearings, needle bearings, helical gears and geared chucks.



Skilsaw Model 2103 electric drill

**Drill-Hoist**—Skilsaw 1" drill model 163 is combined with American "Handiwinch" to make portable drill and power hoist in one tool. Simple adapter kit, that requires no special tools for mounting, locks drill and winch in perfect alignment. Drill can be easily taken out of hoist bracket for drilling jobs. Combination has hoisting capacity of 1,000 lbs. at 10 f.p.m.

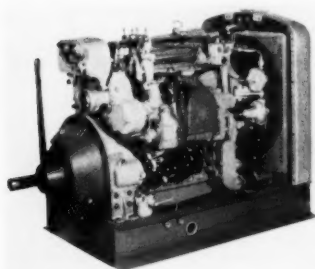


SkilDrill Model 163 and American "Handiwinch"



## NEW EQUIPMENT • MATERIALS

**Diesel Engines Convertible to Natural Gas.**—Detroit Diesel Engine Division, General Motors Corp., 13400 W. Outer Drive, Detroit 28. New option on Series 71 diesel engines enables them to burn natural gas in accordance with diesel high-compression principles. Option is available both on new engines and engines already in use. Change-over permits engines to burn either natural gas with pilot charge of diesel fuel or diesel fuel alone. Change from dual-fuel to diesel-fuel operation is accomplished by moving small lever on gas governor assembly. Dual-fuel unit has no electrical ignition system. Natural gas is delivered to cylinder and fired by small charge of diesel fuel at top of compression stroke. Engine instantly adjusts itself between use of natural gas and straight diesel fuel in case gas pressure falls off. Automatic shut-off valve activated by rise and fall of engine oil pressure cuts off flow of gas when engine is not in use.



G.M. Series 71 dual-fuel diesel engine

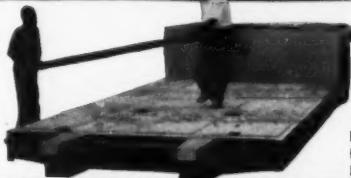
### Movie on Lumber

"The Magic of Lumber," a new 16 mm. motion picture which tells the story of lumber grading, has been produced by the West Coast Bureau of Lumber Grades and Inspection. The 20-minute color and sound film explores the formation of characteristics in the tree, reveals the laboratory tests upon which grading rules are based, explains the work of the lumber grader and classifies lumber grades on the basis of use.

Bookings for the film may be obtained without charge from the West Coast Lumbermen's Association, 1410 S.W. Morrison St., Portland 5, Oreg.

THE CONSTRUCTOR, FEBRUARY 1951

## Like the Camel... IT GETS DOWN!



For EASIEST possible LOADING, the frame is lowered to ground WITHOUT BLOCKING.

## FOR EASIER LOADING!



Maximum deck height of ONLY 16 INCHES assures RAPID, SAFE LOADING of equipment.



## ROGERS POWER LIFT DETACHABLE GOOSENECK TRAILER

PATENTS PENDING

### 5 EXCLUSIVE ADVANTAGES

1. Carries heavier loads on larger tires.
2. Detaches quickly for fast, easy front loading.
3. Stoops to clear low overhead obstructions.
4. Raises its deck to clear high banked crossings.
5. Is detached, loaded and reattached in 5 minutes.

Yes, with this unique trailer you can detach the gooseneck, load up, reattach the gooseneck and drive off in a matter of ONLY 5 MINUTES.

Complete Literature available upon request—Any Rogers Dealer will demonstrate its features right on your desk, with an OPERATING SCALE MODEL.

EXPERIENCE  
builds 'em



PERFORMANCE  
sells 'em

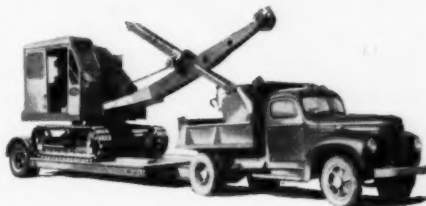
ROGERS BROS. CORP.

ALBION, PENNA.

Export Office: 50 Church St., N. Y. 7, N. Y.  
Cable Address: "Brosites"

223 ORCHARD STREET

Also of timely interest is this ROGERS Tag-A-Long trailer which makes a dump truck serve as a tractor and effects sizable savings for contractors.

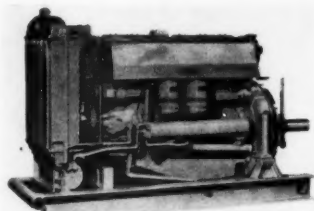


**Saw Guide**—Universal Saw Guide, 1080Z Howard St., San Francisco. Guide is adaptable to any standard portable electric saw. It consists of rigid clamping device for attachment to front member of wooden miter box and adjustable locking quadrant to which are attached either cross-cutting or ripping cradles. Cradles have adjustable sidebars to accommodate shoe of saw from 6" to 12" size. All castings are of high-strength aluminum alloy. Steel parts are cadmium-plated against corrosion.

**Chain Saw**—Von Ruden Manufacturing Co., Claremont, Minn. Hydraulically operated light-weight chain saw operates from power take-off of tractor, jeep, truck or any suitable stationary engine. Long flexible hoses allow operator to work at considerable radius from power source. Saw can be operated in any position. Control lever convenient to operator starts and stops saw without stopping power

source. Safety by-pass valve protects operator and saw.

**Engine**—Murphy Diesel Co., 5333 W. Burnham St., Milwaukee 14. New line of heavy-duty diesel engines consists of 6 models from 145 h.p. to 220 h.p., designed to operate at continuous speeds up to 1,400 r.p.m. They have Murphy design features of true diesel operation, unit fuel injection, 4 valves per cylinder, hydraulic servo-type governor.



New Murphy Diesel engine

**Tamping Rollers**—Wm. Bros Boiler & Mfg. Co., 1057 10th Ave., S.E., Minneapolis 14. "M" series is offered in 6 models. They are sheepfoot types, single, double or triple drum combinations. Foot pressures per sq. in. of "M" series range from 108 lbs. to 315 lbs. Foot surface areas of 5 or 7½ sq. in. are available. "G" series consists of 4 models. They have diamond-shaped feet, in single or double drum types. Foot pressures per sq. in. range from 296 lbs. to 740 lbs. Foot lengths of 8" or 9½" are available. Rollers are described in folder, Form RE-88, available from manufacturer.

**Power Saw Stop Gage**—Consolidated Machinery and Supply Co., 2031 Santa Fe Ave., Los Angeles 21. "Comet" adjustable stop gage permits setting several predetermined lengths at one time. All stop blocks have 4 sq. ins. of gripping surface and can be set without using wrench. Additional stops can be added without disturbing those already positioned. Bar is cold

**Reduce Costs**  
with **OWEN**  
**EXCAVATING**



**DREDGING**



**& REHANDLING**



**The OWEN BUCKET Co.**  
7750 Breakwater Avenue Cleveland, Ohio  
Branches: New York Philadelphia Chicago Berkeley, Cal.

**BUCKETS**

**dewater the Complete way**

The swiftest, surest dewatering method is also the simplest and most economical. "Complete's" patented fluted tube wellpoints combine compactness with lightness and strength—enable you to handle tougher jobs at lower costs—keep you on firm ground always. Write, wire or phone for estimates—we have the equipment, experience and personnel.

Write today for "Complete" catalog Dept. CO

**COMPLETE MACHINERY & EQUIPMENT COMPANY, INC.**

36-40 11th STREET  
LONG ISLAND CITY, N. Y.

Branch Warehouse  
3rd AVE. & ADAMS ST.  
GARY, INDIANA



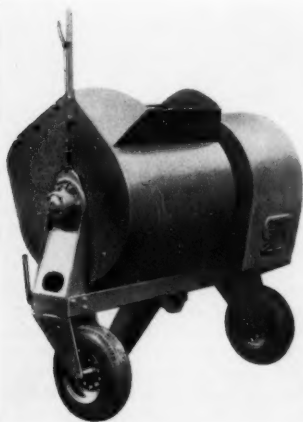
**COMPLETE WELLPOINT SYSTEMS**  
FOR SALE OR RENT

## NEW EQUIPMENT • MATERIALS

rolled steel engraved in  $\frac{1}{8}$ ths for right or left hand application. Stop blocks are solid steel, stop trigger is forced against block by work. All parts of unit are plated.

**Loader**—N. P. Nelson Iron Works, Clifton, N. J. "Loadall" will handle sand, snow, gravel, coal, cinders, humus, leaves, salt, etc. without belt changes or use of special attachments, manufacturer states. It travels under its own power at road speeds up to 10 m.p.h. with working speeds to 6½ m.p.h. It loads heavy materials at from 1¾ to 2¼ cu. yds. per minute. Its 24" spirals have replaceable toothed digging edges. It is powered by 4-cylinder, air-cooled gasoline engine.

**Plaster-Mortar Mixer**—Kwik-Mix Co., Port Washington, Wis. Mixer has 6 cu. ft. capacity and features semi-power tilt arrangement: through action produced by paddle shaft drive, loaded drum tends to tilt itself when released for discharge. Drum also tilts in opposite direction for cleaning. Power is transmitted from single-cylinder, air-cooled gasoline engine by multiple V-belt with enclosed reduction gears running in oil. Electric power is optional. Four non-clogging mixing blades, positioned at 90° around shaft, are slotted for radial and longitudinal adjustment. Blades scour drum on each revolution. Wheel gage is 60" wide. Length of machine is 32".



Kwik-Mix tilting plaster-mortar mixer

## the WARCO motor grader has positive hydraulic controls...cab-controlled



blade positions...rugged  
long-life construction.

- Included in the base price are features usually billed as "extras" by other makes.
- For a unique combination of practical work-producing features, you pay the market's best price. Your **WARCO** dealer can prove this...ask him!

**WARCO 4D-100 Motor Grader**  
Heavy Duty 100 H.P.

**WARCO 4D-76 Motor Grader**  
General Duty 76 H.P.

### ASK TO SEE WARCO COLOR SLIDES

An informative series of color slides showing WARCO design... construction... operation... now at your WARCO dealer's. Ask for a showing soon!

# WARCO

MOTOR GRADERS

W. A. RIDDELL CORP.  
BUCYRUS, OHIO

builders of WARCO Motor Graders — HERCULES Road Rollers



**Compressors**—*Worthington Pump and Machinery Corp., Construction Equipment Division, Holyoke, Mass.* Portable 105' air compressor features new zero pressure retractable third wheel; new underslung spring-mounted undercarriage with heavy-duty commercial 15" trailer tires; retractable support leg; new style unit core radiator with pressure cap to prevent boil-

ing and better operation of engine at high temperatures and altitudes; new carburetor with fixed jets; relocation of instrument panel and battery box to give unrestricted full length tool boxes. \*Two-staged, air-cooled 30' portable compressor has maximum operating pressure of 150 lbs. It is equipped with ASME air receiver, oil bath air cleaners, protective V-belt

guard. Features include: circumferential cooling fins; tube-and-fin type air-cooled intercooler; positive by-pass unloader which holds inlet valve open during idling period; Worthington feather valve; separate, close-grained cast iron honed cylinders; full-floating wrist pins; oil dippers for controlled lubrication; aluminum low pressure piston and cast iron high pressure piston of equal weight for proper balance. It is available in either trailer model with over-all length of 74 $\frac{5}{8}$ " or hand-truck model with over-all length of 65".

*The Tenth of a Series in the interest of more efficient use of steel . . . a vital American resource*



## LACLEDE Multi-Rib Reinforcing Bars

**ROUND BARS** in all sizes . . . to meet latest ASTM A305 Specifications . . . conveniently marked to make your specification job easier. And, of course, improved Laclede deformations mean uniform reinforcement strength, maximum anchorage — plus a more efficient use of steel by eliminating hooks and shortening embedment lengths.

TABLE OF ASTM A305 SPECIFICATIONS

Bar No. #	Unit Wt. Lbs. Ft.	NOMINAL DIMENSIONS ROUND SECTIONS			REQUIREMENTS OF DEFORMATIONS		
		Diameter-Inches Decimal	Cross Sectional Area Sq. Inches	Perimeter	Max. Avg. Spacing In.	Min. Height Inches	Max. Gap Inches <sup>a</sup>
2†	0.167	0.250	0.05	0.785	.. ..	.. ..	.. ..
3	0.376	0.375	0.11	1.178	0.262	0.015	0.143
4	0.668	0.500	0.20	1.571	0.350	0.020	0.191
5	1.043	0.625	0.31	1.963	0.437	0.028	0.239
6	1.502	0.750	0.44	2.356	0.526	0.038	0.286
7	2.044	0.875	0.60	2.749	0.612	0.044	0.334
8	2.670	1.000	0.79	3.142	0.700	0.050	0.383
9‡	3.400	1.128	1.00	3.544	0.790	0.056	0.431
10‡	4.303	1.270	1.27	3.990	0.889	0.064	0.487
11‡	5.313	1.410	1.56	4.430	0.987	0.071	0.540

<sup>a</sup>Bar numbers are based on the number of 1/8 inches in the nominal diameter of the section.  
<sup>†</sup>Bar number 2 in plain rounds only.  
<sup>‡</sup>Bars numbered 9-10-11 correspond to former 1" sq., 1 1/8" sq., and 1 1/4" sq. sizes, and are equivalent to those former standard bar sizes in weights and nominal cross-sectional areas.  
<sup>c</sup>Chord of 12 1/2% of Nom. Perimeter.

"For the Best in Reinforcing Steel . . . Specify Laclede"



**LACLEDE STEEL COMPANY**

St. Louis, Mo.

**Dry Cement Conveyor**—*Barber-Greene Co., Aurora, Ill.* Accessories have been developed to adapt Barber-Greene Model 358 under-car aggregate car unloader and Models 362 and 363 portable belt conveyors to handling bulk cement and other dry-batch materials. Model 358 has been fitted with complete metal covers for under-car section as well as up-run. Collapsible canvas spouts with metal stiffeners can be drawn up between cross ties (unloader is operated in shallow pit beneath rails) and attached to hoppers of cement car. Discharge end of unloader is equipped with metal, all-enclosed concentrating spout to direct discharge into conveyor hopper and minimize dust. Conveyor housing, which can be used on Models 362 and 363, encloses entire length of belt except for small opening at foot end. Concentrating spout, similar to that on unloader, is fitted at head end to control escape of fines.

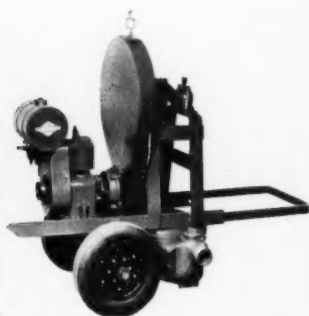


Barber-Greene under-car unloader equipped for dry cement handling

**Concrete Drills**—*Tilden Tool Co., 1995 N. Fair Oaks, Pasadena, Calif.* New kit of rotary "Konkrete Kore" drills contains 6 drill bits, 3 in centerless type sized 3/16", 1/4", 3/8" and 3 in "Kore" type sized 1/2", 5/8", 3/4". They are packaged in roll-around plastic case with protective end flap and with fabric ties to secure kit when not in use.



**Pumps**—Marlow Pumps, Box 566, Ridgewood, N. J. Two light-weight "Mud Hog" diaphragm pumps weigh only half as much as other "Mud Hog" pumps. Primarily intended for seepage control and ditch work, they will lift from levels 25' below pump and handle heavy liquids. Model 202 2" pump will handle up to 2,100 gals. per hour and 3" Model 302 will pump up to 3,200 gals. per hour. Both models are mounted on rigid steel chassis equipped with 2x3:00 hollow cushion rubber tires. Liquid enters pump through 2" or 3" threaded male suction fitting, passes through replaceable flapper valve with self-cleaning valve seat, flows under diaphragm, is forced through another rubber flapper valve and self-cleaning valve seat and is eliminated through 2" or 3" threaded male discharge fitting. Pump body is separated from chassis by removing 4 cap screws. Pumps are powered by 2 h.p. Model 8-R6 Briggs and Stratton engine equipped with 6 to 1 geared speed reduction. Power is transmitted to pump crank shaft by oil-lubricated chain drive.



Marlow "Mud Hog" diaphragm pump

**Portable Lighting System**—Joy Manufacturing Co., Henry W. Oliver Bldg., Pittsburgh 22. Low-voltage system, called "Joy-Lite," is driven by compressed air. It will develop output of 250 to 280 watts with air consumption not exceeding 25 c.f.m. Generator is mounted in steel box equipped with carrying handle. Lamps have tripod swivel bases, which can be used as column clamps, and hooks which serve as hangers. Unit weighs 48 lbs. Complete details are given in Bulletin 87-1, available from manufacturer.



## Trouble-Free PERFORMANCE

"It's the only machine we've had for any length of time that has had no major repairs." That's what William Wylie, equipment foreman, says about the MICHIGAN ½ yd. Crawler Excavator owned by A. G. Woods Company, Windsor, Connecticut. Yes . . . it's quite a record for an excavator that has been "worked hard," 10 to 14 hours a day for a year and a half.

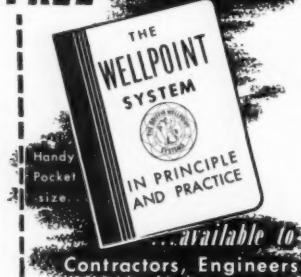


At Woody Crest Housing Development in West Hartford, Connecticut, the MICHIGAN digs service, sewer, water and drainage ditches . . . excavates for septic tanks and basements . . . loads trucks. Digging 450 feet of trench and laying the eight inch pipe is an average day's work.

Service records like this are typical for MICHIGAN Excavator-Cranes. Why settle for less? When you need an excavator-crane . . . investigate MICHIGAN . . . you'll agree it's your best buy! Write, wire or phone for complete details.

**MICHIGAN** POWER SHOVEL COMPANY  
485 Second Street, Benton Harbor, Michigan, U. S. A.

## FREE HANDBOOK



Handy Pocket size  
...available to  
**Contractors, Engineers**  
Here is the first comprehensive practical handbook on WELLPOINTS! This is the information contractors and engineers have been seeking for years. Not a catalog—not an advertising piece—but a valuable authoritative work written by engineers experienced in dewatering.

**WET EXCAVATIONS**  
Tells you: • HOW A WELLPOINT SYSTEM FUNCTIONS • HOW TO PLAN A WELLPOINT LAYOUT • HOW TO INSTALL YOUR WELLPOINT SYSTEM • HOW TO OPERATE IT EFFICIENTLY.

**GRIFFIN WELLPOINT CORP.**  
881 East 141st St. New York 54, N. Y.

Please send me, without obligation, my copy of THE WELLPOINT SYSTEM.

Send today

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Firm \_\_\_\_\_  
Address \_\_\_\_\_

Clip this to your letterhead

The Same  
Atlas  
Speed  
Form  
Units

did all these jobs:

Walls  
Floors  
Columns  
Manholes

Save  
with  
versatile

Circular  
Tanks

### ATLAS SPEED FORMS

Do a variety of jobs with the same Atlas unit. You save on Cost of Forms and Form Labor everytime!  
Send coupon for proof.

**IRVINGTON FORM & TANK CORP.**  
Irvington 22, N. Y.

Send more information. I am interested in forms for

Name \_\_\_\_\_  
Firm \_\_\_\_\_  
Address \_\_\_\_\_

## NEW LITERATURE

**Pipe—Armco Drainage & Metal Products, Inc., Middletown, Ohio.** Booklet on Armco corrugated metal pipe lists types of full-round pipe and "Pipe-Arch" available for various types of sewers, culverts, conduits or irrigation systems. Booklet also contains reference data for assistance in selecting most suitable structure. Also included are details on fittings and instructions on installation of Armco drainage structures. Photos and case histories show installations.

**Sheeting—Armco** offers booklet on steel interlocking and flange-type sheeting for trenches, cofferdams, cut-off walls, shore protection. Data are included on driving and properties of both types of Armco sheeting as well as method of figuring sizes and spacing of wales and struts. Job installations are described and pictured.

**Drainage Product Installation—**Armco has published 46-page manual on installation of its drainage products. It discusses handling of products, location, proper excavation and preparation of base in various types of foundation soils and rock. Detailed instructions are given for assembly of corrugated metal pipe, coated or paved pipe, "Pipe-Arches," "Hel-Cor" pipe and "Multi-Plate" pipe and arches. Recommendations are given for proper backfilling for various loading conditions. Installation of under-drains to insure proper functioning is also discussed. Detailed sketches illustrate installation recommendations.

**Timber Bridges—Timber Structures, Inc., N. W. 29th and Yeon Ave., Portland 8, Oreg.** Folder *Permanent Timber Bridges*, presents types of bridges offered, including deck arch, bowstring, composite deck, girder and parallel chord bridges. Each type is pictured and description of components is given.

**Garage Doors—Strand Garage Door Division, Detroit Steel Products Co., 3143 Griffin St., Detroit 11.** Instructions for installing Strand 9' track-type garage doors are given in 4-page folder. Sketches, diagrams and photos show step-by-step procedure in checking door openings and installing doors.

**Vibrating Screens—Link-Belt Co., 307 N. Michigan Ave., Chicago 1.** Link-Belt "CA" concentric action vibrating screens for medium and heavy-

duty service in sizing, rinsing and dewatering of wide range of materials are illustrated, described and tabulated in booklet No. 2354. Detailed dimensions, weights and other engineering layout data are given, including page on how to select right size screen for handling given capacity of material per hour over square openings of up to 3".

**Swivels—General Machine & Welding Works, 1100 E. 2d St., Pomona, Calif.** Folder presents Miller angular ball-bearing swivels for use with wire line. Function of swivel in preventing loads from spinning and lines from twisting is described. Detailed pictures show construction of swivels with block and hook. Table of sizes and specifications is included.

**Crushers—Pioneer Engineering Works, Minneapolis 13.** Tenth edition of *Facts and Figures* is pocket-size booklet of information on crushing, screening, washing, materials handling and aggregates. Tables cover stage of reduction and capacities of crushers, capacities of screens, how to select conveyors and feeders. Horsepowers required to operate various types of equipment are given and there are tables showing how to select drives. Charts show percentages of each size of stone in product of crusher, whether it be in open or closed circuit. Tables on electric power have been added, as have tables for bituminous contractor. Other tables contain miscellaneous information on weights, measures, conversion factors, trigonometric functions, square and cube roots, etc.

**Buckets—C. S. Johnson Co., Champaign, Ill.** All-welded clamshell buckets are presented in new folder. Advantages of all-welded design are described and features of buckets described. Complete table of condensed specifications, listing details of capacity, weight, dimensions, sheave and cable data for each size and type of Johnson clamshell, is included. Photos show buckets in action. Summary of Johnson line of concrete batching and cement handling equipment is given.

**Glass for Construction—Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.** Manual contains description of qualities, list of suggested uses and data for specification of Libbey-Owens-Ford glass products. Photos show actual glass installations.

## NEW LITERATURE

Manual includes list of firms which manufacture standard sash for Thermopane and instructions for using new L-O-F glazing clip with multiple-glass insulating window unit.

**Rollers**—Wm. Bros Boiler & Mfg. Co., 1057 10th Ave., S. E., Minneapolis 14. Two folders show big rubber-tired rollers on compaction jobs. One, titled *New Trends in Compaction*, illustrates complete line of Bros pneumatic-tire rollers. Diagrammatic drawing describes wheel action of patented Bros "Wobble-Wheel" design. Other folder shows 35 and 50-ton Bros "Roll-O-Factors" working on dams, dikes, highways, airports and reclamation projects.

**Pipeline Construction**—Thew Shovel Co., Lorain, Ohio. Bulletin, *Lorain's on Pipeline Construction*, shows power shovels and cranes working on pipeline jobs. Featured is "Pipeliner," specially designed hoe with wide gage crawlers to straddle pipeline ditches.

### Plaster Passes Fire Test

Both perlite-gypsum and vermiculite-gypsum plaster applied on metal lath have won an official four-hour rating in protecting steel columns against fire under tests conducted by Underwriters' Laboratories, according to the Metal Lath Manufacturers Association.

### Dumping on the Fly



A Euclid Model 7TDT-14SH single engine scraper working at Hickory Airport, N. C., dumps loads of 17 cubic yards at a speed between 25 and 30 m.p.h. No bulldozer was used for spreading on the fill. Gilbert Engineering Co., Statesville, N. C. (A.G.C.) is general contractor.

# "Low level bidding" gets the job — maintains profit

Successful drainage bids are ones that get the job and retain adequate profit. That's why so many experienced contractors are practicing "low level bidding" with Armco Corrugated Metal Pipe. They have found the cost of installing short, sectional pipe requires higher bids to maintain profits.

Figured on an *installed* basis Armco Pipe saves money in many ways. Flexible, corrugated metal design assures ample strength without excess weight. This means low handling and hauling costs. Job costs are low because unskilled labor quickly and easily makes the installation. There is no breakage, no curing, no waste, no delay.

Individual sections of standard

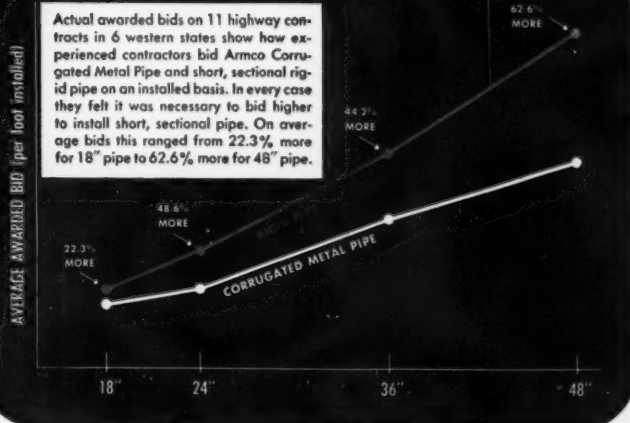
Armco Corrugated Pipe and PIPE-ARCH are supplied in any length that can be hauled and handled. No large and expensive equipment is required for installation. A few men with a rope sling or a small A-frame can handle the largest structure. Connections are made with simple band couplers. Where end finishing is needed, prefabricated Armco End Sections are simple to install.

Use Armco Drainage Products on highways, railways, airports and wherever else you need economical, easy-to-install drainage structures. Armco Drainage & Metal Products, Inc., 1891 Curtis Street, Middletown, Ohio.

Export: The Armco International Corporation



**ARMCO**  
**CORRUGATED**  
**METAL PIPE**



## UNEQUALLED Quality and Value



### "KING" CLAMPS Single Bolt Double Bolt

Made of malleable iron, to provide greater strength and durability than any other band type clamps. Production in vast quantities is never allowed to depreciate their superior quality or utility values. Cadmium plated, rustproof.

Stocked by Manufacturers and Jobbers of Mechanical Rubber Goods.

\*Reg. U. S. Pat. Off.

## DIXON

VALVE & COUPLING CO.

Main Office and Factory: PHILADELPHIA 22, PA.  
BRANCHES: CHICAGO, BIRMINGHAM, LOS ANGELES, HOUSTON

## MANUFACTURERS' NOTES

INTERNATIONAL HARVESTER Co. has given F. J. Schreck, assistant general supervisor of service, industrial, complete responsibility for industrial service during the absence of W. W. Black, general supervisor. Mr. Black has been transferred for an indefinite period to the company's government work.

A review of diesel engine development at the research laboratory of CATERPILLAR TRACTOR Co. was given as the James Clayton Lecture at the general meeting of the Automobile Division, Institution of Mechanical Engineers, London, England, on November 14 by C. G. A. Rosen, former director of research at Caterpillar and now consulting engineer. He is the sixth man awarded the annual James Clayton Lecture honor and the second American.

The WELLMAN ENGINEERING Co. has purchased the property and business of the Anker-Holth Manufacturing Co. of Port Huron, Mich., manufacturer of hydraulic and air-operated cylinders, chucks and collets, air valves and accessories. The company will become the Anker-Holth Division of Wellman. Headquarters will remain in Port Huron and J. C. Hodge, executive vice president of Wellman, will supervise the division's operations.

Paul E. Young has been appointed director of purchases of THE TIMKEN ROLLER BEARING Co., succeeding Dwight A. Bessmer who was named assistant to the president recently. R. J. Archibald has been named assistant general purchasing agent.

J. Austin Carrington has been appointed director of sales for the SHUNK MANUFACTURING Co. He was formerly marketing and distribution executive with General Electric Co. . . . Walter A. Wind has been appointed assistant to the general manager. He was formerly production consultant to the Vermont Bureau of Industrial Research.

W. R. Smith has been named assistant sales manager of the BUFFALO-SPRINGFIELD ROLLER Co.

Charles L. Hardy has been elected president of JOSEPH T. RYERSON & SON, INC., succeeding Everett D. Graff, who has become chairman of the executive committee. Thomas Z. Hay-

ward has been elected vice president in charge of sales. . . . Robert C. Ross has retired after 47 years with Ryerson. He had been vice president in charge of operations for many years.

A. G. Hendrickson has joined A. O. SMITH CORP. as welding equipment sales manager. He was formerly assistant manager of the welder sales division of Harnischfeger Corp.

W. R. Persons has been elected vice president in charge of sales of THE LINCOLN ELECTRIC Co. He has been general sales manager since 1946.

PULLMAN-STANDARD CAR MANUFACTURING Co. has acquired the entire tractor allied equipment business of Isaacson Iron Works. Manufacture of Isaacson products, now being carried on in Seattle, will be transferred to the Hammond, Ind., plant of Pullman-Standard. Operation of the Isaacson plant at Rockford, Ill., will be continued by Pullman-Standard.

L. A. Watts has been appointed assistant general sales manager of WICKWIRE SPENCER STEEL DIVISION of The Colorado Fuel and Iron Corp.

THE FOUR WHEEL DRIVE AUTO Co. announces the appointment of William Hanson as manager of a newly created market development and research department.

Ralph K. Gottshall, assistant general manager of the explosives department, has been appointed assistant to the president, ATLAS POWDER Co.

William L. Hewes, assistant director of purchases of HERCULES POWDER Co., retired December 31 after 41 years of service.

### Obituary

Edwin J. Paulus, 62, general manager, fabricated steel construction, Bethlehem Steel Co., died December 22. Mr. Paulus was one of the nation's leading steel construction engineers and supervised the fabricated steel construction of many notable bridges, buildings and other structures.

### PRESTRESSED CONCRETE

A rational method of construction for elevated express highways, heavy underpasses, underground garages, containers and ducts carrying liquids.

L. COFF, Consulting Engineer, 198 Broadway, New York 7, N. Y., Cortland 7-2753



## ADVERTISERS' PRODUCTS

Manufacturers' addresses are listed on page 95

### Asphalt Plants (Portable)

Barber-Greene Co.  
Iowa Mfg. Co.  
White Mfg. Co.

### Axles (Truck)

Eaton Mfg. Co., Axle Division

### Backfillers

Bucyrus-Erie Co.  
Cleveland Trencher Co.  
Harnischfeger Corp.  
Parsons Co.

### Batchers

Blaw-Knox Division  
Butler Bin Co.  
Construction Machinery Co.  
Heltzel Steel Form & Iron Co.  
C. S. Johnson Co.

### Bearings (Anti-Friction, Tapered Roller)

Hyatt Bearings Division  
Timken Roller Bearing Co.

### Bins

Blaw-Knox Division  
Butler Bin Co.  
Heltzel Steel Form & Iron Co.  
Iowa Mfg. Co.  
Irvington Form & Tank Corp.  
C. S. Johnson Co.  
Universal Engineering Corp.

### Bits (Detachable Drill)

Ingersoll-Rand Co.  
Timken Roller Bearing Co.

### Blades (Grader, Maintainer, Snow Plow, Bulldozer, Scarifier)

Shunk Manufacturing Co.

### Bridges

American Bridge Co.  
Armco Drainage & Metal Products

### Buckets (Clamshell & Dragline)

Blaw-Knox Division  
Bucyrus-Erie Co.  
Harnischfeger Corp.  
C. S. Johnson Co.  
Owen Bucket Co.  
Wellman Engineering Co.

### Buckets (Concrete)

Blaw-Knox Division  
Construction Machinery Co.  
Heltzel Steel Form & Iron Co.  
Jaeger Machine Co.  
Owen Bucket Co.

### Building Papers

Sisalkraft Co.

### Buildings (Steel)

Allied Structural Steel Cos.  
American Bridge Co.  
Armco Drainage & Metal Products  
Clinton Bridge Corp.  
Gage Structural Steel Co.  
Macomber, Inc.  
Midland Structural Steel Co.

### Buildings (Steel)—Continued

Smooth Ceilings System  
Truscon Steel Co.

### Bulldozers

J. D. Adams Mfg. Co.  
Bucyrus-Erie Co.  
LaPlant-Choate Mfg. Co.  
R. G. LeTourneau, Inc.

### Car Pullers

Clyde Iron Works

### Ceilings

Smooth Ceilings System

### Cement (Common and Special)

Halliburton Portland Cement Co.  
Lehigh Portland Cement Co.  
Lone Star Cement Corp.  
Universal Atlas Cement Co.

### Cement (White)

Trinity White, General Portland Cement Co.  
Universal Atlas Cement Co.

### Clamps (Hose)

Dixon Valve & Coupling Co.

### Compressors

Allis-Chalmers Co.  
Ingersoll-Rand Co.  
Jaeger Machine Co.

### Concrete Curing Material

Sisalkraft Co.

### Concrete Mixers, Pavers, Tampers

Chain Belt Co.  
Construction Machinery Co.  
Foote Co.  
Jaeger Machine Co.  
Knickerbocker Co.  
Koehring Co.  
Kwik-Mix Co.  
T. L. Smith Co.  
Worthington Pump & Machinery Corp.—Ransome Div.

### Concrete Vibrators

Electric Tamper & Equipment Co.  
Ingersoll-Rand Co.  
Vibro-Plus Products, Inc.  
White Mfg. Co.

### Conveying Machinery

Barber-Greene Co.  
Chain Belt Co.  
Iowa Mfg. Co.  
Link-Belt Co.  
Universal Engineering Corp.

### Cranes

Austin-Western Co.  
Bucyrus-Erie Co.  
Cleveland Trencher Co.  
Clyde Iron Works  
Harnischfeger Corp.  
Koehring Co.  
R. G. LeTourneau, Inc.  
Link-Belt Speeder Corp.  
Michigan Power Shovel Co.  
Northwest Engineering Co.



## there's a hook in it

If every mixer manufacturer tried to "popularize" a different series of drum sizes, estimating would be anybody's guess.

That's why the construction industry established uniform sizes and rigid requirements for mixers and pavers, which have been changed only where experience proved new sizes would serve better.

Whether you are a contractor, architect or engineer, the AGC Rating Plate is your protection. Always look for it on the mixer you buy or the mixer that pours your jobs.



## Mixer Manufacturers Bureau

Affiliated with the Associated

General Contractors of America, Inc.



CHAIN BELT COMPANY  
Milwaukee, Wis.

CONSTRUCTION MACHINERY CO.  
Waterloo, Iowa

THE FOOTE CO., INC.  
Nunda, N. Y.

THE JAEGER MACHINE CO.  
Columbus, Ohio

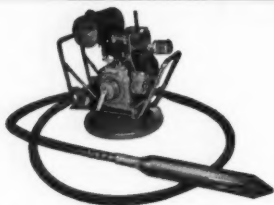
THE KNICKERBOCKER CO.  
Jackson, Mich.

KOEHRING COMPANY  
Milwaukee, Wis.

KWIK-MIX COMPANY  
Port Washington, Wis.

THE T. L. SMITH COMPANY  
Milwaukee, Wis.

WORTHINGTON PUMP & MACHINERY CORP.  
Ransome Division, Dunsen, N. J.



## Only White Vibrators Have All These Features

which have made them successful all over the world.

**All Flexible Drive Sections are Interchangeable.**

No special sections, or expensive extra couplings needed. Each casing has ball bearing connector.

**No Limit to Length of Flexible Drive.**

Each driving core has slip joint which does not separate in service. Prevents stretching.

**All Vibrator Heads are Interchangeable.**

Can be put directly on any drive section. Can be opened for repairs. Double row ball bearings.

**Grinding Spindles can be attached to any section.**

No special drive needed. For wet and dry grinding.

**Standard Power Units.**

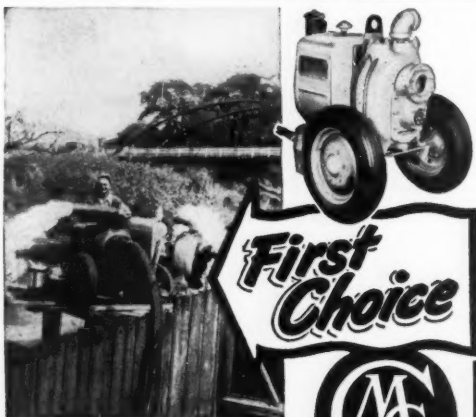
Gasoline engines or electric motors which can be serviced almost anywhere. Swivel base. Barrows.

**Minimum of Repair Parts Needed.**

One spare driving core is ample. Either 7' or 12'.

Write for circular and name of nearest dealer.

**Elkhart White Mfg. Co., Indiana**



## SUPREME IN THE FIELD

• **ASSURES unmatched** self-priming speed—the result of exclusive CMC dual jet construction.

• Non-clogging, open thrash impeller handles solids up to 1/4 intake size.

• Available in sizes from 1 1/2" to 10"—capacities from 3,000 to 200,000 gal. per hr.

CMC equipment is sold and serviced by leading equipment distributors everywhere.

**DUAL  
PRIME  
PUMPS**

**CONSTRUCTION MACHINERY CO'S.**  
MATTINGLY, IOWA, U.S.A.

MIXERS-HOISTS-RADIAL SAWS-CARTS

## ADVERTISERS' PRODUCTS

### Crushing Machinery

Allis-Chalmers Co.  
Austin-Western Co.  
Iowa Mfg. Co.  
Universal Engineering Corp.

### Culverts

Armco Drainage & Metal Products

### Cutters (Abrasive)

Skilaw, Inc.  
Wodack Electric Tool Corp.

### Decking (Roof Steel & Aluminum)

Macomber, Inc.

### Derricks

Clyde Iron Works

### Doors (Metal, Wood)

Ceco Steel Products Corp.  
Kinnear Mfg. Co.  
Truscon Steel Co.

### Dredging Machinery

Bucyrus-Erie Co.  
Harnischfeger Corp.  
Northwest Engineering Co.

### Drills & Drilling Machinery

Bucyrus-Erie Co.  
Independent Pneumatic Tool Co.  
Ingersoll-Rand Co.  
Timken Roller Bearing Co.

### Drills (Electric)

Skilaw, Inc.  
Wodack Electric Tool Corp.

### Dump Bodies

Anthony Co.

### Elevators (Material)

Chain Belt Co.  
Iowa Mfg. Co.  
Link-Belt Co.  
Universal Engineering Corp.

### Engines

Allis-Chalmers Tractor Div.  
American Hoist & Derrick Co.  
Caterpillar Tractor Co.  
Continental Motors Corp.  
Cummins Engine Co.  
Detroit Diesel Engine Division  
Harnischfeger Corp.  
Ingersoll-Rand Co.  
International Harvester Co.  
Wisconsin Motor Corp.

### Expansion Joints

Laclede Steel Co.

### Fasteners (For Steel, Concrete)

Ramset Fasteners, Inc.

### Finishing Machines (Bituminous)

Barber-Greene Co.  
Blaw-Knox Division

### Finishing Machines (Concrete)

Blaw-Knox Division

### Floor Construction

Smooth Ceilings System

### Flooring

Truscon Steel Co.

### Forms (Concrete) and Accessories

Blaw-Knox Division  
Economy Forms Corp.  
Heltzel Steel Form & Iron Co.  
Irvington Form & Tank Corp.  
Joseph T. Ryerson & Son, Inc.  
Symons Clamp & Mfg. Co.  
Universal Form Clamp Co.  
Williams Form Engineering Corp.

### Generating Sets (Electric)

Caterpillar Tractor Co.

### Graders

J. D. Adams Mfg. Co.  
Allis-Chalmers Tractor Div.  
Austin-Western Co.  
Caterpillar Tractor Co.  
Euclid Road Machinery Co.  
Galion Iron Works & Mfg. Co.  
Koehring Co.  
W. A. Riddell Corp.

### Gravel Plants (Portable)

Iowa Mfg. Co.

### Grinders (Electric)

Independent Pneumatic Tool Co.  
Wodack Electric Tool Corp.

### Gypsum Roof Decks

United States Gypsum Co.

### Hammers (Electric)

Independent Pneumatic Tool Co.  
Wodack Electric Tool Corp.

### Hoists

American Hoist & Derrick Co.  
Anthony Co.  
Clyde Iron Works  
Construction Machinery Co.  
Harnischfeger Corp.  
Ingersoll-Rand Co.  
Jaeger Machine Co.  
McKiernan-Terry Corp.

### Hose (Air, Water, Steam, Suction)

United States Rubber Co.

### Insurance (Automobile, Casualty, Compensation, Liability)

Aetna Casualty & Surety Co.  
Employers Mutuals of Wausau

### Joists (Steel)

Ceco Steel Products Corp.  
Macomber, Inc.

### Kettles, Heating (Asphalt & Tar)

White Mfg. Co.

### Loaders (Portable)

Barber-Greene Co.  
Link-Belt Co.

### Lubricants

Lubriplate Division

### Menders (Hose)

Dixon Valve & Coupling Co.  
Ingersoll-Rand Co.

## ADVERTISERS' PRODUCTS

### Mixers (Truck)

Blaw-Knox Division  
Chain Belt Co.  
Jaeger Machine Co.

### Mixing Plants

Blaw-Knox Division  
Butler Bin Co.  
Chain Belt Co.  
Jaeger Machine Co.  
C. S. Johnson Co.

### Mortar (Masonry)

Lehigh Portland Cement Co.

### Nipples (Hose)

Dixon Valve & Coupling Co.

### Partitions (Steel, Load-Bearing)

Macomber, Inc.

### Pile Drivers

American Hoist & Derrick Co.  
Austin-Western Co.  
Bucyrus-Erie Co.  
Harnischfeger Corp.  
Ingersoll-Rand Co.  
Link-Belt Co.  
McKiernan-Terry Corp.  
Northwest Engineering Co.

### Piling (Steel)

Allied Structural Steel Cos.  
American Bridge Co.  
Armco Drainage & Metal Products  
Bethlehem Steel Co.  
Clinton Bridge Corp.  
L. B. Foster Co.  
Gage Structural Steel Co.  
Midland Structural Steel Co.

### Pipe

Armco Drainage & Metal Products  
L. B. Foster Co.  
Laclede Steel Co.

### Process Screen Plates for Equipment Identification

Reinhart Fajen

### Pumps (Contractors')

Barnes Mfg. Co.  
C.H.&E. Mfg. Co.  
Carver Pump Co.  
Chain Belt Co.  
Complete Machinery & Equipment Co.  
Construction Machinery Co.  
Gorman-Rupp Co.  
Griffin Wellpoint Corp.  
Independent Pneumatic Tool Co.  
Ingersoll-Rand Co.  
Jaeger Machine Co.  
Marlow Pumps  
Novo Engine Co.  
Rice Pump & Machine Co.  
Sterling Machinery Corp.  
Worthington Pump & Machinery Corp.

### Pumps (Jetting)

Complete Machinery & Equipment Co.  
Griffin Wellpoint Corp.

### Quantity Surveyors

H. A. Sloane Associates

### Quarry Plants

Austin-Western Co.  
Iowa Mfg. Co.  
Universal Engineering Corp.

### Rail

L. B. Foster Co.

### Railway Equipment & Track Material

L. B. Foster Co.  
Wisconsin Motor Corp.

### Reinforced Concrete

Smooth Ceilings System

### Reinforcement Accessories

Economy Forms Corp.  
Symons Clamp & Mfg. Co.  
Universal Form Clamp Co.  
Williams Form Engineering Corp.

### Reinforcing Steel and Mesh

American Bridge Co.  
Bethlehem Steel Co.  
Ceco Steel Products Corp.  
Laclede Steel Co.  
Joseph T. Ryerson & Son, Inc.  
Truscon Steel Co.

### Rollers

J. D. Adams Mfg. Co.  
Austin-Western Co.  
Blaw-Knox Division  
Bucyrus-Erie Co.  
Buffalo-Springfield Roller Co.  
Euclid Road Machinery Co.  
Galion Iron Works & Mfg. Co.  
R. G. LeTourneau, Inc.  
W. A. Riddell Corp.

### Roof Deck (Steel)

Allied Structural Steel Cos.  
Ceco Steel Products Corp.  
Clinton Bridge Corp.  
Gage Structural Steel Co.  
Irvington Form & Tank Corp.  
Midland Structural Steel Co.  
Truscon Steel Co.

### Roofing

United States Gypsum Co.

### Rope (Wire)

American Hoist & Derrick Co.  
L. B. Foster Co.  
A. Leschen & Sons Rope Co.  
R. G. LeTourneau, Inc.  
Joseph T. Ryerson & Son, Inc.

### Sanders (Belt, Disc)

Skilsaw, Inc.

### Sash (Metal, Wood)

Truscon Steel Co.

### Saws (Chain & Portable)

Independent Pneumatic Tool Co.  
Skilsaw, Inc.

### Scarifiers

J. D. Adams Mfg. Co.  
Austin-Western Co.

## CORRECT REEVING IS ESSENTIAL

...for  
maximum  
bucket  
efficiency



PEAK bucket performance and service life depend on correct reeving. If your bucket is not digging a full load, increase the number of parts of line in the bucket. If overloading, reduce the number of parts to obtain maximum closing and opening speed. Proper reeving also can prevent breakage of teeth, lips or bucket structures. Call on Blaw-Knox engineering service for the latest information on how to obtain increased bucket efficiency. Get complete details from Bulletin 2230-R.

### BLAW-KNOX DIVISION

of Blaw-Knox Company  
2101 Farmers Bank Building  
Pittsburgh 22, Pa.

## BLAW-KNOX CLAMHELL BUCKETS

THE MOST COMPLETE RANGE OF SIZES AND TYPES

## WHEREVER YOU ARE BUILDING keep plenty of dependable



always on the job

Write for Free Samples and Practical Data or see your Lumber or Building Supply Dealer

### THE SISALKRAFT CO.

Dept. TC 2 — 205 West Wacker Drive, Chicago 6, Illinois  
New York 17, New York — San Francisco 5, California  
Manufacturers of SISALKRAFT • SISALATION • COPPER ARMORED SISALKRAFT



## McKIERNAN-TERRY Job-Proven PILE HAMMERS

McKiernan-Terry Pile Hammers are job-proven and time-tested . . . the choice of engineers and contractors on major construction projects throughout the world. Available in a standardized line of 10 double-acting hammers, 5 single-acting hammers and 2 double-acting extractors. Write for free bulletin.

Also builders of coal and ore bridges, bulk material unloaders, bridge operating mechanisms, hoists and marine equipment, and specially designed machinery.

### McKIERNAN-TERRY CORPORATION

Manufacturing Engineers 18 PARK ROW, NEW YORK 38, N. Y.

# minutes are MONEY

No one knows better than we do the hard work and long hours you put into every bid for an important contract.

While we cannot help with your estimating, we can save you time just when you're busiest.

When you have a "working partnership" with your F&D agent, your phone call is all he needs to execute your bond. No lengthy interviews or inquiries. He'll know your operation, and reputation, too.

Before that next contract comes up, why not get acquainted with your local F&D agent...and let him blueprint a plan for fast action when you need it.



**FIDELITY AND DEPOSIT COMPANY**  
Baltimore Maryland

FIDELITY AND SURETY BONDS  
BURGLARY, AND OTHER NEEDED  
FORMS OF INSURANCE

AFFILIATE: AMERICAN BONDING COMPANY OF BALTIMORE

## ADVERTISERS' PRODUCTS

### Scrapers

J. D. Adams Mfg. Co.  
Austin-Western Co.  
Bucyrus-Erie Co.  
Caterpillar Tractor Co.  
Galion Iron Works & Mfg. Co.  
LaPlant-Choate Mfg. Co.  
R. G. LeTourneau, Inc.  
W. A. Riddell Corp.

### Screens (Sand, Gravel & Coal)

Iowa Mfg. Co.  
Link-Belt Co.

### Shores

Symons Clamp & Mfg. Co.

### Shovels (Power)

American Hoist & Derrick Co.  
Austin-Western Co.  
Bucyrus-Erie Co.  
Butler Bin Co.  
Harnischfeger Corp.  
Koehring Co.  
Link-Belt Speeder Corp.  
Michigan Power Shovel Co.  
Northwest Engineering Co.

### Shutters (Fire, Labeled)

Kinnear Mfg. Co.

### Slings (Wire Rope)

American Hoist & Derrick Co.  
A. Leschen & Sons Rope Co.

### Spreaders (Bituminous Surface)

Galion Iron Works & Mfg. Co.  
Universal Engineering Corp.

### Stabilizing Equipment

Harnischfeger Corp.  
Iowa Mfg. Co.  
Seaman Motors, Inc.

### Steel (Structural)

Allied Structural Steel Co.  
American Bridge Co.  
Bethlehem Steel Co.  
Clinton Bridge Corp.  
Gage Structural Steel Co.  
Macomber, Inc.  
Midland Structural Steel Co.  
Joseph T. Ryerson & Son, Inc.  
Smooth Ceilings System  
Truscon Steel Co.

### Surety Bonds

Aetna Casualty & Surety Co.  
American Surety Co.  
Employers Mutuals of Wausau  
Fidelity & Deposit Co.

### Tanks (Grain & Miscellaneous)

American Bridge Co.

### Tires

General Tire & Rubber Co.  
Goodyear Tire & Rubber Co.  
United States Rubber Co.

### Tools (Pneumatic, Electric)

Allis-Chalmers Co.  
Ingersoll-Rand Co.

### Tools (Powder-Actuated)

Ramset Fasteners, Inc.

### Torches (Kerosene)

White Mfg. Co.

### Tractors

Allis-Chalmers Tractor Div.  
Caterpillar Tractor Co.  
International Harvester Co.  
Oliver Corp., Industrial Div.

### Trailers (Dump & Crawler Wheel)

Euclid Road Machinery Co.  
R. G. LeTourneau, Inc.

### Trailers (Heavy Equipment)

Jahn Trailer Division  
Rogers Bros. Corp.

### Trenchers

Barber-Greene Co.  
Cleveland Trencher Co.  
Harnischfeger Corp.  
Independent Pneumatic Tool Co.  
Michigan Power Shovel Co.  
Parsons Co.

### Truck Axles

Eaton Mfg. Co., Axle Division

### Trucks (Motor)

Euclid Road Machinery Co.  
International Harvester Co.

### Trusses (Steel)

Macomber, Inc.

### Tunnel Liner Plates

Armco Drainage & Metal Products  
Irvington Form & Tank Corp.

### Valves (Air-Self-Heating)

Dixon Valve & Coupling Co.

### Wagons (Dump)

J. D. Adams Mfg. Co.  
Austin-Western Co.  
Caterpillar Tractor Co.  
Euclid Road Machinery Co.  
LaPlant-Choate Mfg. Co.  
R. G. LeTourneau, Inc.

### Washing Plants

Austin-Western Co.  
Iowa Mfg. Co.  
Link-Belt Co.  
Universal Engineering Corp.

### Wellpoint Systems

Complete Machinery & Equipment Co.  
Griffin Wellpoint Corp.

### Winches

Clyde Iron Works



# MANUFACTURERS LISTED IN GUIDE

# INDEX OF ADVERTISERS

**J. D. Adams Mfg. Co.**  
Indianapolis 6, Ind.

**Aetna Casualty & Surety Co.**  
Hartford 15, Conn.

**Allied Structural Steel Cos.**  
20 N. Wacker Drive  
Chicago 6, Ill.

**Allis-Chalmers Co.**  
Milwaukee 1, Wis.

**American Bridge Co.**  
Frick Bldg.  
Pittsburgh, Pa.

**American Hoist & Derrick Co.**  
St. Paul 1, Minn.

**American Surety Co.**  
100 Broadway  
New York 5, N. Y.

**Anthony Co.**  
Sreator, Ill.

**Armco Drainage & Metal  
Products, Inc.**  
2280 Curtis St.  
Middletown, Ohio

**Austin-Western Co.**  
Aurora, Ill.

**Barber-Greene Co.**  
Aurora, Ill.

**Barnes Mfg. Co.**  
603 N. Main St.  
Mansfield, Ohio

**Bethlehem Steel Co.**  
Bethlehem, Pa.

**Blaw-Knox Division**  
2000 Farmers Bank Bldg.  
Pittsburgh 22, Pa.

**Bucyrus-Erie Co.**  
South Milwaukee, Wis.

**Buffalo-Springfield Roller Co.**  
Springfield, Ohio

**Butler Bin Co.**  
953 Blackstone Ave.  
Waukesha, Wis.

**C. H. & E. Mfg. Co.**  
3842 N. Palmer St.  
Milwaukee 12, Wis.

**Carver Pump Co.**  
Muscatine, Iowa

**Caterpillar Tractor Co.**  
Peoria 8, Ill.

**Ceco Steel Products Corp.**  
5601 W. 26th St.  
Chicago 50, Ill.

**Chain Belt Co.**  
1625 W. Bruce St.  
Milwaukee 4, Wis.

**Cleveland Trencher Co.**  
20100 St. Clair Ave.  
Cleveland 17, Ohio

**Clinton Bridge Corp.**  
101 S. Second St.  
Clinton, Iowa

**Clyde Iron Works**  
Duluth 1, Minn.

**Complete Machinery & Equipment  
Co.**  
36-40 11th St.  
Long Island City 1, N. Y.

**Construction Machinery Co.**  
Waterloo, Iowa

**Continental Motors Corp.**  
Muskegon, Mich.

**Cummins Engine Co.**  
Columbus, Ind.

**Detroit Diesel Engine Division,  
General Motors Corp.**  
Detroit 28, Mich.

**Dixon Valve & Coupling Co.**  
Columbia & Hancock Sts.  
Philadelphia 22, Pa.

**Eaton Mfg. Co., Axle Division**  
739 E. 140th St.  
Cleveland 10, Ohio

**Economy Forms Corp.**  
4301 E. 14th St.  
Des Moines 13, Iowa

**Electric Tamper & Equipment Co.**  
Ludington, Mich.

**Employers Mutuals of Wausau**  
Wausau, Wis.

**Euclid Road Machinery Co.**  
Cleveland 17, Ohio

**Reinhart Fajen**  
Box 115  
Warsaw, Mo.

**Fidelity & Deposit Co.**  
Fidelity Bldg.  
Baltimore 3, Md.

**Foote Co.**  
1914 State St.  
Nunda, N. Y.

**L. B. Foster Co.**  
Pittsburgh 30, Pa.

**Gage Structural Steel Corp.**  
3123-41 S. Hayne Ave.  
Chicago 8, Ill.

**Galion Iron Works & Mfg. Co.**  
Galion, Ohio

**General Tire & Rubber Co.**  
Akron, Ohio

**Goodyear Tire & Rubber Co.**  
Akron 16, Ohio

**Gorman-Rupp Co.**  
Mansfield, Ohio

**Griffin Wellpoint Corp.**  
881 E. 141st St.  
New York 54, N. Y.

**Halliburton Portland Cement Co.**  
Navigation Blvd.  
Corpus Christi, Texas

**A.G.C. Forms and Reports** ..... 76  
**Allied Structural Steel Companies** ..... 22  
**Allis-Chalmers Tractor Division** ..... 12, 13  
**American Bridge Co.** ..... 73  
**Armco Drainage & Metal Products, Inc.** ..... 89

**Barber-Greene Co.** ..... 18  
**Blaw-Knox Division** ..... 93  
**Bucyrus-Erie Co.** ..... Cover 4  
**Buffalo-Springfield Roller Co., The** ..... 16  
**Butler Bin Co.** ..... 78

**Caterpillar Tractor Co.** ..... 45  
**Chain Belt Co.** ..... 36  
**Complete Machinery & Equipment Co.** ..... 84  
**Construction Machinery Companies** ..... 92

**Detroit Diesel Engine Division** ..... 20  
**Dixon Valve & Coupling Co.** ..... 90

**Eaton Manufacturing Co., Axle Division** ..... Cover 2  
**Electric Tamper & Equipment Co.** ..... 80  
**Employers Mutuals of Wausau** ..... 75  
**Euclid Road Machinery Co., The** ..... 10

**Fidelity and Deposit Co.** ..... 94  
**Foster, L. B., Co.** ..... 96

**General Tire & Rubber Co., The** ..... 6  
**Goodyear Tire & Rubber Co.** ..... 1  
**Griffin Wellpoint Corp.** ..... 88

**Hyatt Bearings Division** ..... 35

**Ingersoll-Rand Co.** ..... 40, 41  
**International Harvester Co.** ..... 48, 49  
**Iowa Manufacturing Co.** ..... 60, 61  
**Irrvington Form & Tank Corp.** ..... 88

**Johnson, C. S., Co.** ..... 57  
**Koehring Co.** ..... 56, 57

**Laclede Steel Co.** ..... 86  
**Lehigh Portland Cement Co.** ..... 65  
**LeTourneau, R. G., Inc.** ..... 52, 53  
**Lone Star Cement Corp.** ..... 2

**Macomber, Inc.** ..... 51  
**McKiernan-Terry Corp.** ..... 93  
**Michigan Power Shovel Co.** ..... 87  
**Mixer Manufacturers Bureau** ..... 91

**Northwest Engineering Co.** ..... 8

**Oliver Corp., The** ..... 66  
**Owen Bucket Co.** ..... 84  
**Parsons Co.** ..... 57

**Ramsel Fasteners, Inc.** ..... 81  
**Riddell, W. A., Corp.** ..... 85  
**Rogers Brothers Corp.** ..... 83

**Siskraft Co., The** ..... 93  
**Skilsaw, Inc.** ..... 14  
**Sloane, H. A., Associates** ..... 82

**Trinity Division, General Portland Cement Co.** ..... Cover 3  
**Truscon Steel Co.** ..... 4

**United States Gypsum Co.** ..... 62

**Vibro-Plus Products, Inc.** ..... 82

**Wellman Engineering Co.** ..... 79  
**White Manufacturing Co.** ..... 92  
**Wodack Electric Tool Corp.** ..... 96

## MANUFACTURERS LISTED IN GUIDE

**Harnischfeger Corp.**  
4418 W. National Ave.  
Milwaukee 14, Wis.

**Heltzel Steel Form & Iron Co.**  
Warren, Ohio

**Hyatt Bearings Division**  
**General Motors Corp.**  
Harrison, N. J.

**Independent Pneumatic Tool Co.**  
Aurora, Ill.

**Ingersoll-Rand Co.**  
11 Broadway  
New York 4, N. Y.

**International Harvester Co.**  
180 N. Michigan Ave.  
Chicago 1, Ill.

**Iowa Mfg. Co.**  
Cedar Rapids, Iowa

**Irrington Farm & Tank Corp.**  
Irvington, N. Y.

**Jaeger Machine Co.**  
528 Dublin Ave.  
Columbus 16, Ohio

**Jahn Trailer Division**  
**Pressed Steel Car Co.**  
601, 6 N. Michigan Ave.  
Chicago 2, Ill.

**C. S. Johnson Co.**  
Champaign, Ill.

**Kinnear Mfg. Co.**  
650-680 Fields Ave.  
Columbus 16, Ohio

**Knickerbocker Co.**  
Jackson, Mich.

**Koehring Co.**  
3026 W. Concordia Ave.  
Milwaukee 10, Wis.

**Kwik-Mix Co.**  
Port Washington, Wis.

**Laclede Steel Co.**  
Arcade Bldg.  
St. Louis 1, Mo.

**LaPlant-Chouteau Mfg. Co.**  
Cedar Rapids, Iowa

**Lehigh Portland Cement Co.**  
Allentown, Pa.

**A. Leschen & Sons Rope Co.**  
5909 Kennerly Ave.  
St. Louis 12, Mo.

**R. G. LeTourneau, Inc.**  
Peoria 5, Ill.

**Link-Belt Speeder Corp.**  
1201 Sixth St., S.W.  
Cedar Rapids, Iowa

**Lone Star Cement Corp.**  
100 Park Ave.  
New York 17, N. Y.

**Lubriplate Division**  
**Fiske Brothers Refining Co.**  
Newark 5, N. J.

**Macomber, Inc.**  
Canton 1, Ohio

**Marlow Pumps**  
Ridgewood, N. J.

**McKiernan-Terry Corp.**  
18 Park Row  
New York 7, N. Y.

**Michigan Power Shovel Co.**  
485 Second St.  
Benton Harbor, Mich.

**Midland Structural Steel Corp.**  
1300-20 S. 54th St.  
Cicero 50, Ill.

**Northwest Engineering Co.**  
Field Bldg., 135 S. LaSalle St.  
Chicago 3, Ill.

**Novo Engine Co.**  
212 Porter St.  
Lansing 5, Mich.

**Oliver Corp., Industrial Division**  
19300 Euclid Ave.  
Cleveland 17, Ohio

**Owen Bucket Co.**  
7750 Breakwater Ave.  
Cleveland 2, Ohio

**Parsons Co.**  
Newton, Iowa

**Ramsel Fasteners, Inc.**  
12117 Berea Road  
Cleveland 11, Ohio

**Rice Pump & Machine Co.**  
Grafton, Wis.

**W. A. Riddell Corp.**  
Bucyrus, Ohio

**Rogers Bros. Corp.**  
223 Orchard St.  
Albion, Pa.

**Joseph T. Ryerson & Son, Inc.**  
P.O. Box 8000-A  
Chicago 80, Ill.

**Seaman Motors, Inc.**  
276 N. 25th St.  
Milwaukee 3, Wis.

**Shunk Mfg. Co.**  
Bucyrus, Ohio

**Siskraft Co.**  
205 W. Wacker Drive  
Chicago 6, Ill.

**Skilaw, Inc.**  
5033 Elston Ave.  
Chicago 30, Ill.

**H. A. Sloane Associates**  
415 Lexington Ave.  
New York 17, N. Y.

**T. L. Smith Co.**  
2853 N. 32d St.  
Milwaukee 10, Wis.

**Smooth Ceilings System**  
802 Metropolitan Life Bldg.  
Minneapolis 1, Minn.

**Sterling Machinery Corp.**  
405 Southwest Blvd.  
Kansas City 10, Mo.

**Symons Clamp & Mfg. Co.**  
4259 W. Diversey Ave.  
Chicago 39, Ill.

**Timken Roller Bearing Co.**  
Canton 6, Ohio

**Trinity White, General Portland Cement Co.**  
111 W. Monroe St.  
Chicago 3, Ill.

**Truscon Steel Co.**  
Youngstown 1, Ohio

**United States Gypsum Co.**  
Chicago 6, Ill.

**United States Rubber Co.**  
Rockefeller Center  
New York 20, N. Y.

**Universal Atlas Cement Co.**  
100 Park Ave.  
New York 17, N. Y.

**Universal Engineering Corp.**  
331 8th St., N. W.  
Cedar Rapids, Iowa

**Universal Form Clamp Co.**  
1238 N. Kostner  
Chicago 51, Ill.

**Vibro-Plus Products, Inc.**  
54-11 Queens Blvd.  
Woodside, Long Island, N. Y.

**Wellman Engineering Co.**  
7015 Central Ave.  
Cleveland 4, Ohio

**White Mfg. Co.**  
Elkhart, Ind.

**Williams Form Engineering Corp.**  
Box 925, Madison Square Station  
Grand Rapids 7, Mich.

**Wisconsin Motor Corp.**  
Milwaukee 46, Wis.

**Wodack Electric Tool Corp.**  
4627 W. Huron St.  
Chicago 44, Ill.

**Worthington Pump & Machinery Corp.**  
Holyoke, Mass.

**Worthington Pump & Machinery Corp.—Ransome Div.**  
Dunellen, N. J.



### WODACK "DO-ALL" Electric Hammer

#### A score of tools in one

You use the adaptable De-all for many jobs. It drills concrete, brick or stone. 2400 hard blows per min. Takes 20 sizes star drills ( $\frac{1}{8}$ " to  $1\frac{1}{2}$ ") in 5 lengths up to 24". Also tools for chipping, routing, channeling, cutting, vibrating, etc. Detach hammer (1 min.) and De-all is ready for metal drilling (up to  $\frac{3}{8}$ "), wood drilling (up to  $\frac{1}{2}$ "), grinding, buffing, etc.

#### Saves time and labor

You will speed your work with De-all. Drills a  $\frac{3}{8}$ " hole in ordinary concrete 1" deep in 15 seconds (or less). Easy to operate; only 15 lbs. Runs from lamp socket or generator.

GET THE FULL FACTS TODAY  
WRITE FOR BULLETIN 442-C

**Wodack Electric Tool Corp.**  
4627 W. Huron St., Chicago 44, Ill.

## Need STEEL SHEET PILING?



RENT IT!...  
'FASTER'  
FROM FOSTER

All lengths, all sections at lower rental rates that give you an advantage when you bid on jobs. Corrugated Steel Sheet Piling — Pile Hammers — Pile Extractors for rent. Send for Piling Reference Wall Chart CP-10.

RAILS • TRACK ACCESSORIES • PIPE • WIRE ROPE

LB FOSTER co.

Pittsburgh 30, Pa.  
Chicago 4, Ill.

New York 7, N. Y.  
Houston 2, Tex.

# Trinity White

## PORTLAND CEMENT



...for architectural concrete units, torrazzo, stucco, cement paint



Wherever beauty and good appearance are important factors—  
use Trinity White. It is the *whitest* white cement. It is a true  
portland cement that meets ASTM and Federal specifications.

Trinity Division, General Portland Cement Co., 111 W. Monroe St., Chicago;  
Republic Bank Bldg., Dallas; 816 W. 5th St., Los Angeles;  
305 Morgan St., Tampa; Volunteer Building, Chattanooga.

as white



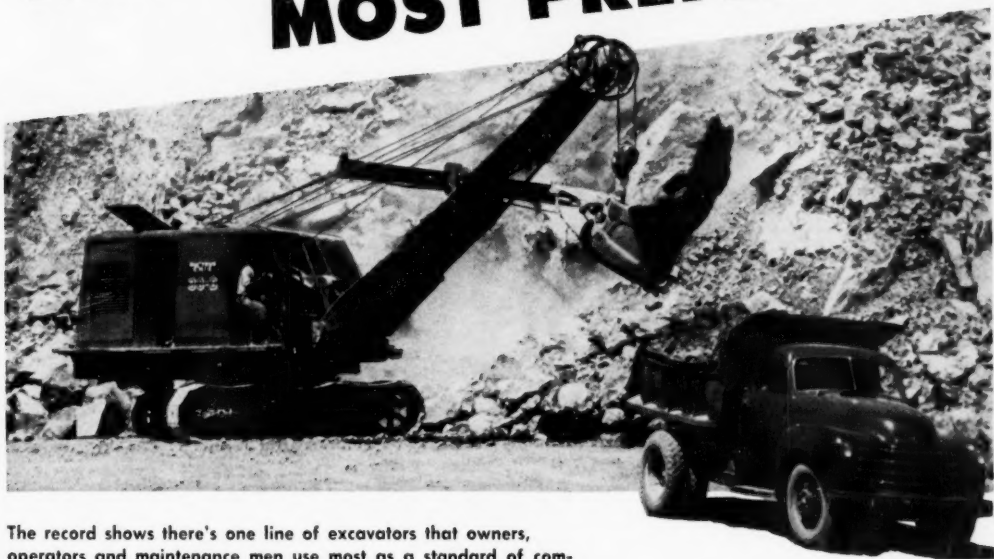
as snow

*the whitest white cement...*

PLAIN OR  
WATERPROOFED

what does it take  
to make an excavator

## MOST COMPARED... MOST PREFERRED



The record shows there's one line of excavators that owners, operators and maintenance men use most as a standard of comparison . . . one line they prefer most. That's Bucyrus-Erie, and here are a few of the reasons why:

**SIZE AND STRENGTH TO MATCH THE JOB.** Seven different Bucyrus-Erie excavators are included in the  $\frac{3}{8}$ - to 4-yard range of gas, diesel and single-motor electric machines. Each is designed as an entirely separate model. Materials and construction are specified for best results in each size. Complete facilities permit use of either welded or cast steel, plus special heat treatment, to meet design requirements and to provide extra long life.

**PROVEN PERFORMANCE.** Bucyrus-Erie design balance ties in all the phases of the operating cycle smoothly

and efficiently for maximum output. Examples of this performance: yardage wise owners have bought more 10-B's than any other  $\frac{3}{8}$  yd. excavator; more Bucyrus-Eries for rock than any other make.

**SERVICE — WHERE AND HOW YOU WANT IT.** There are 63 Bucyrus-Erie distributors throughout the nation . . . one of them near you. Featuring expert mechanics and genuine Bucyrus-Erie parts, they're your assurance of fast, dependable service.



**BUCYRUS-ERIE COMPANY**  
SOUTH MILWAUKEE, WISCONSIN